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A Classification of Instructional Programs

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U.S. Department of Education
T. H. Bell
Secretary

Office of Educational Research and Improvement
Dick W. Hays
Acting Assistant Secretary

National Center for Education Statistics
Marie D. Eldridge
Administrator

National Center for Education Statistics

"The purpose of the Center shall be to collect and disseminate statistics and other data related to education in the United States and in other nations. The Center shall . . . collect, collate, and, from time to time, report full and complete statistics on the conditions of education in the United States; conduct and publish reports on specialized analyses of the meaning and significance of such statistics; . . . and review and report on education activities in foreign countries."--Section 406(b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e-1).

An earlier draft of this publication was prepared by the National Center for Higher Education Management Systems, Boulder, Colorado, under contract number 300-78-0510 with the National Center for Education Statistics.

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Foreword

A current problem in collecting, reporting, and analyzing information about instructional programs is the lack of a complete and up-to-date classification structure, terminology, and definitions for describing them. This deficiency is a serious problem in achieving completeness and comparability of educational statistics.

As part of its program to provide assistance to the education community, the National Center for Education Statistics (NCES) awarded a contract to the National Center for Higher Education Management Systems (NCHEMS) of Boulder, Colorado, to develop a classification of instructional programs and to provide terms and definitions for describing instructional programs for all of education.

This classification was the result of the cumulative efforts of many people. A 16-member National Planning Committee advised NCES and NCHEMS on the project approach, the content and format of the document, the numerical coding and classification structure, and the instructional programs and additional dimensions. NCHEMS requested nominations for the Committee from a variety of educational associations whose members represented various levels of education, types of educational institutions, educational agencies, and coordinating bodies. A list of candidates was then prepared that featured a broad geographic distribution and equal representation of major educational affiliations.

NCES also established a 21-member committee in Washington comprised of people from the Department of Education and other Federal agencies involved in educational data collection and reporting. This committee met with NCES and NCHEMS staff before each planning committee meeting to discuss the status of the project and the structure and form of the classification.

In addition, 7,000 copies of a field review edition were mailed to a number of individuals representing higher education institutions, vocational institutions, state agencies, education associations, and other interested parties. The reviews and comments received were of assistance in the formulation of the classification.

This instructional program classification will serve a wide range of people in the education community, from those involved in elementary programs to those involved in post-doctoral studies, including persons in the various forms of adult/ continuing education and those in both the private and public sectors. It is hoped that this classification will make their tasks for collecting, recording, reporting, analyzing, interpreting, and disseminating data about instructional programs easier.

Marie D. Eldridge
Administrator, National Center for Education Statistics

February 1981

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This publication was made possible by the contributions of many individuals, foremost were: Emanuel Weinstein, National Occupational Information Coordinating Committee; and Kent Bennion, Office of Vocational and Adult Education, U.S. Department of Education. In addition, members of the NCHEMS staff that worked on the project were: Ken Sauer, Dennis Jones, and Ellen Cherin. Thomas Hill of NCES edited the publication and enhanced its presentation.

How to Obtain More Information

Requests for additional information about the classification should be directed to Gerald S. Malitz, National Center for Education Statistics, (Presidential Building), 400 Maryland Avenue SW., Washington, D.C. 20202, telephone (301) 436-6348.

Information about the Center's statistical program and a catalog of NCES publications may be obtained from the Statistical Information Office, National Center for Education Statistics, (Presidential Building), 400 Maryland Avenue SW., Washington, D.C. 20202, telephone (301) 436-7900.

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Chapter I

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Introduction

At the time of its inception, the Office of Education was given responsibility for gathering data about education in the United States. Its mandate, in the legislative act that established the Office in 1867, was to "collect such statistics and facts as shall show the condition and progress of education in the several States and Territories." Since 1965 this function has been assumed by the National Center for Education Statistics (NCES). The Education Amendments of 1974 (Sec. 406(b)(1), 88 stat. 629), reaffirming the mandate of 1867, state that NCES shall "collect, collate, and, from time to time, report full and complete statistics on the condition of education in the United States."

To support this congressionally-mandated collection of data, the Office of Education--and more recently NCES--has supported the development of a series of terminology publications. (See appendix A for a complete list of NCES terminology publications issued to date). These publications were developed as two separate series, one for elementary and secondary schools and systems, the other for higher education. Terminology about community and junior colleges has variously been included in either and both series. The elementary and secondary series, initiated in the 1950s, have a two-fold purpose: (1) to create a standard terminology to guide the reporting of data and (2) to provide guidance to state and local education agencies in establishing record-keeping systems. The higher education series, the first of which was published in 1970, is directed at only the first purpose. The terminology standards contained in these publications have become widely used, in collecting data from educational institutions, not only by NCES, but by State governments and Federal agencies as well.

Two NCES publications used to classify instructional programs are the *Standard Terminology for Curriculum and Instruction in Local and State School Systems,* commonly referred to as Handbook VI and *A Taxonomy of Instructional Programs in Higher Education,* commonly referred to as the HEGIS Taxonomy. The new classification is intended to replace the Taxonomy and fill a void in Handbook VI with regards to instructional programs.

Reasons for Change

There are at least five reasons for developing a new classification. First, Handbook VI and the HEGIS Taxonomy, both published in 1970, need updating since new instructional programs have evolved or have gained new significance. Ten years ago, programs such as elementary particle physics, laser electro-optic technology, and energy conservation and use technology did not seem as important as they are today.

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Second, the HEGIS Taxonomy contains no program definitions or descriptors. This deficiency diminishes the reliability and validity of HEGIS data because a program title alone often does not convey enough information about the program to indicate what degrees should be reported under that heading. It might not be apparent, for example, that a dual French-German degree should be reported under the category "foreign languages, general". Titles no less ambiguous are "health professions, general, " "English, general," "educational supervision," and "international public service (other than diplomatic service)." Other difficulties can arise for someone who possesses little expertise in a given discipline and encounters two programs that superficially appear quite similar. Thus, the nonengineer might find it difficult to distinguish "geological engineering" from "geophysical engineering".

Third, the HEGIS Taxonomy and Handbook VI conflict in the area of vocational education because they approach it in markedly different ways. This confusion is particularly disconcerting to community colleges, which are required by the Federal government to report data on occupational programs according to the two classifications. Although the HEGIS Taxonomy attempts to encompass "technological and occupational curriculums, " only technologies are covered for the most part. In addition, the Taxonomy inadequately represents or ignores many nontechnological programs in areas such as agriculture, home economics, and marketing. Some technological programs also appear in the Taxonomy but not in Handbook VI, and vice versa. For example, "medical record technology" is listed in the HEGIS Taxonomy but not in Handbook VI, while "environmental-control technology" (heating, cooling, refrigeration) shows up only in Handbook VI. There are difficulties even for many programs that appear in both classifications. For example, "computer operator and peripheral equipment operation technologies" in HEGIS is only roughly equivalent to the Handbook VI category "scientific data processing".

Fourth, both the HEGIS Taxonomy and Handbook VI contain weaknesses in the way instructional programs are classified and disaggregated. HEGIS offers no intermediary level of aggregation that groups together programs such as physics or chemistry. In order to get the total number of degrees granted in chemistry, one must sum data from six subspecialties. Handbook VI suffers from the same problem. Under distributive education, for example, 97 six-digit categories (the third level of disaggregation) are included in no hierarchial arrangement of two-digit catgories. In some instances, Handbook VI also contains too much detail, for example, one finds the ten-digit category "housing practices" under "production management" (eight digits), "animal science" (six digits), "agricultural production" (four digits), and "agriculture" (two digits, the highest level of aggregation).

Fifth, nontraditional and adult education programs are not covered by either the HEGIS Taxonomy or Handbook VI. As a result of this deficiency, NCES surveys of adult education activities were not able to directly utilize HEGIS or Handbook VI categories.

Intended Uses of the Classification

According to 1978 data, there are in the United States over 3,100 colleges and universities, over 7,600 noncollegiate schools offering occupational programs, and over 15,000 elementary and secondary school districts. Most of these schools and colleges have developed instructional programs that meet the needs of their institution and its students, have labeled those programs in terms that identify and describe those programs in ways that best serve their internal needs, and have evolved classification and coding schemes that reflect their own arrangements and meet their management needs.

However, many times schools and colleges must communicate information about their programs with State or Federal agencies, professional or accrediting groups, and other institutions in a language that everyone understands. In this case, that means a set of data categories and definitions that are subscribed to by all parties to the information exchange (data collecting and reporting) activity. This does not mean that institutions must modify their internal systems to satisfy the needs of external reporting. To the contrary, to do so would reduce the utility of data for internal use, in most institutions the primary consideration. Rather an institution should be prepared to translate its data into a common structure for purposes of reporting data and otherwise communicating with other agencies and institutions. It is recommended that primary sources of information (i.e., schools and colleges) use this classification to structure their record-keeping system for internal use if:

1) it is found to be appropriate for intra-institutional use, and

2) external (reporting) uses are so prevalent relative to to internal uses that efficiency is better served.

This classification is intended as a reference tool to assist in the collection, reporting, and interpretation of data about instructional programs. It is intended to aid those who: design data-collection instruments; respond to the questionnaires; and compile, verify, and analyze data. The classification provides a universe for designers of data-collection instruments from which program titles may be selected. Survey respondents and those who compile and verify data may view the classification as a dictionary to clarify where a particular datum should be reported. And finally, researchers and analysts can use the classification as a means of understanding the scope or content validity of a particular datum.

The classification will also provide the Federal government with a standard means of describing instructional programs that can be used in developing Federal survey instruments. NCES will use the classification for HEGIS and the Vocational Education Data System (VEDS) surveys as well as other NCES surveys. HEGIS consists of a number of individual survey instruments, one of which focuses on the number of associate, bachelor's, master's, doctor's, and first-professional degrees granted by colleges and universities. Degree data are reported by kind of degree and by

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field or specialty. This classification will serve as the standard reference from which appropriate specialty categories appearing on the HEGIS form will be drawn. As a result of the 1976 Education Amendments, NCES is also charged with establishing VEDS to supply annual data on vocational education programs in secondary schools, vocational-technical schools, and colleges and universities. (Public Law 94-482. Sec. 161, 20 USC 2391). VEDS data is also collected by specialties or fields. The classification will provide the standard reference material from which the list of vocational education specialties appearing on the survey instrument will be created.

Quite apart from federal purposes and obligations, the classification has value for States and institutions. State education agencies, central offices of college and university systems, and superintendents of large school districts have data reporting needs not unlike those of the Federal government. These administrative units require standardized data on instructional programs for such functions as budgeting, funding, planning, allocating classroom space, assigning personnel, and reviewing programs. State agency personnel need standardized data from each institution within their state, for example, to compare program offerings and avoid duplications. Central university system offices and school district offices also rely upon standardized data to prepare system-wide and district-wide budgets.

The classification should also be useful to individual institutions. To keep abreast of latest developments, institutions belonging to a particular interest group frequently wish to exchange data on a regular basis. Similarly, institutions undertaking self-studies often wish to compare their own data with equivalent data from institutions of like size and complexity.

Among the many potential users of this classification are State and Federal agencies and other organizations that are not primary sources of data about instructional programs. Since they must first collect data from schools and colleges before they can either use the data or pass it on to third parties; such organizations may well find it useful to structure their record-keeping systems in accordance with the classification. Indeed, as a result of the review of the preliminary draft, the coding structure has been modified somewhat to make this particular use more easy to accommodate.

Cautionary Notes About Use

The classification describes the content of programs at three levels (two-digit, four-digit, and six-digit levels). Its design allows it to be used in collecting data at varying levels of detail. However, it must remain the responsibility of the individual or agency requesting the data to specify the level of detail appropriate to their needs. Many times, no single level of detail will yield the desired data. The classification provides the building blocks; it does not provide the blueprint for all uses. The task must lie with the user.

Finally, users should not interpret similiar categorization of programs as connoting exact comparability. Programs at two institutions can be categorized and coded in exactly the same way, and yet be different. This can occur for a variety of reasons. First, the classification represents a common framework to which institutions have translated their own data; they have the end point, but not necessarily the beginning point, of the translation process in common. Second, there are many nuances to a full description of an instructional program, nuances involving methods of teaching, prior preparation of students, mix of resources used, etc. In short, it must be recognized that comparability is a relative, not an absolute, concept. If used properly, the classification should help assure that programs categorized together are more like each other than they are like programs in other categories.

Concepts Basic to the Classification

a. The Definition of "Instructional Programs"

For purposes of this publication, instructional programs are defined as:

> One or more structured learning experiences designed to accomplish a predetermined objective or set of allied objectives, such as preparation for advanced study, qualification for an occupation or range of occupations, or solely to increase knowledge or understanding.[1]

Two points in particular should be noted. First, as used in this publication, instructional programs are comprised of *structured learning experiences.* This means that learning that occurs by happenstance or that accrues through experience, but in the absence of a designed intent are to be excluded. At the same time, "structured learning experience" should be interpreted broadly. Student learning contracts, organized field experiences, and other *planned* experiences can be accommodated within this definition, The important thing is that they are planned and structured; the methods by which they are carried out are not determining considerations. Included within the scope of this definition are:

- programs leading to the award of a high school diploma, college degree, or certificate of some form (programs resulting in an award are generally designed to provide one with a well-rounded education or to prepare one for further study or for entry into one or more occupations);
- programs leading to educational attainment generally commensurate with a particular age or grade level--for example, a fifth-grade instructional program (grade-level programs generally prepare an individual for the next level of education);

[1] Chismore, W. Dale, and Hill, Quentin M. *A Classification of Educational Subject Matter.* State Educational Records and Reports Series, Handbook XI. U.S. Department of Health, Education, and Welfare, National Center for Educational Statistics, NCES 78-112. Washington, D.C.: U.S. Government Printing Office, 1978.

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- programs intended to keep employed individuals current in their fields (so-called continuing professional education or occupational updating programs); and

- programs intended to equip individuals for leisure-time pursuits.

Second, instructional programs are planned and organized toward an end point. They can be described in terms of their explicitly stated or implied objectives; for example, preparation for advanced study, preparation for job entry, occupational or professional updating, or preparation for a licensing exam. Alternatively, instructional programs can be described or categorized according to the forms of recognition bestowed upon completion of the programs; for example, high school diplomas, certificates, or degrees. In many cases, the basic objectives are implied by the nature of the award conferred upon program completion. Because there is more commonality of practice and understanding about awards than about program purposes more abstractly stated, the latter approach has been adopted in this publication.

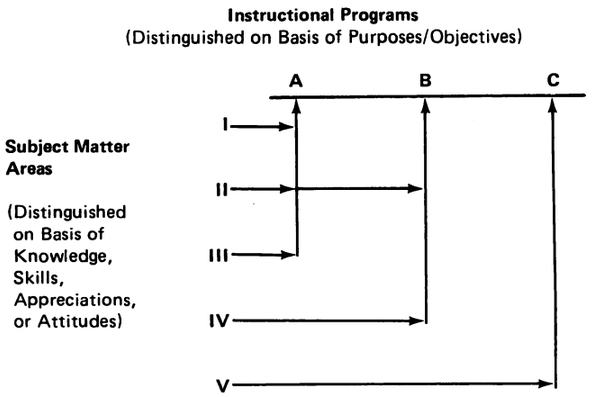
b. The Related Concept of Subject Matter

The concept of instructional programs is often confused with the concept of subject matter. This widespread confusion requires that a distinction be made between these concepts and guidelines developed for determining what should or should not be considered as an instructional program. According to NCES, subject matter is defined as:

> a body of facts, understandings, processes, skills, values, and appreciations related to a specific aspect of human activity and experience. Subject matter includes the accumulated knowledge, skills, appreciations, and attitudes comprising the substance of any subject-matter area.[2]

Instructional programs, therefore, are distinguished by the "objective or set of objectives" they are designed to accomplish, while subject matter areas are distinguished by the substantive content of the "knowledge, skills, appreciations, or attitudes" that they embody. While these fundamental concepts are highly interrelated in that all instructional programs have a subject-matter base, they are not synonymous. Figure 1 depicts that relationship between instructional programs and subject matter areas in a simplified fashion.

Figure 1. Relationship Between Instructional Programs and Subject Matter Areas



The relationships between Subject Matter Areas I, II, III, and Instructional Program A illustrate a common phenomenon: instructional programs generally derive from many subject matter areas. For example, an instructional program that prepares students for advanced study in physics may draw from mathematics and chemistry, in addition to physics. The relationships between Subject Matter Area II and Instructional Programs A and B illustrate that multiple instructional programs often draw from a common subject matter area. Programs designed for such different purposes as preparing students for advanced study in physics and preparing students as entry-level machinists both draw on mathematics, though at differing levels of complexity. Finally, the relationship between Subject Matter Area V and Instructional Program C shows that many instructional programs have as their sole purpose the transferral of knowledge or skills embodied in a single subject matter area. Examples of this relationship are programs to help students with a communication skill such as reading or programs to acquaint an individual with recent advances in chemistry.

The concept of an instructional program generally applies to collecting data about degrees granted and student majors, while the concept of subject matter generally applies to collecting data about either resources on or not on levels of activity--full-time equivalent (FTE) faculty assigned or student credit/contact hours generated--for instruction in a particular discipline. It is expected, in addition to its intended uses that the new classification will be widely used to describe both instructional programs and subject matter. Users should take particular care to clearly state how the classification is being used in any given application.

[2] Putnam, John F., and Chismore, W. Dale. *Standard Terminology for Curriculum and Instruction in Local and State School Systems.* State Educational Records and Reports Series, Handbook VI. U.S. Department of Health, Education, and Welfare, Office of Education, OE-23052. Washington, D.C.: U.S. Government Printing Office, 1970.

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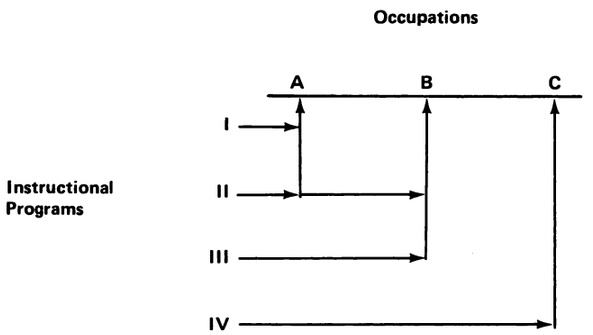
c. Relationship to Labor Market Supply and Demand

A major use of instructional program data, particularly at the State and National levels, is in the development of information for labor market supply and demand comparisons. A single classification of programs will eliminate the wide variation in classification of occupational programs which existed because of the use of both Handbook VI and the HEGIS Taxonomy. In addition, it was decided to align instructional program (supply) categories as closely as possible with occupational (demand) categories.

Figure 2 depicts the relationships between instructional programs and occupations in a simplified fashion.

Figure 2. Relationship Between Instructional Programs and Occupations



This illustration serves to indicate that:

1) Many occupations draw their entrants from multiple instructional programs--for example sales personnel can be trained in business, engineering, liberal arts, etc.;

2) Many instructional programs provide manpower supply to many occupations; liberal arts is the classic example of this phenomenon; and

3) There are some programs for which relationships to occupations are singular and direct.

Where the latter relationship holds, the classification structure has been designed to facilitate linkages to occupation information (the categories of Mechanics and Repairers, and Precision Production have been developed on this basis, for example). Where the linkages are not singular, the classification reflects practice in educational institutions.

Criteria for Designing the Classification

Six criteria were used to design the classification:

1. Distinctions among programs are made on the basis of program purposes or objectives. For example, civil engineering technology is distinguished from civil engineering because the explicit purpose of the first program is to train individuals who can assist civil engineers.

2. The classification applies to all instructional programs irrespective of the organization providing the instruction. Thus the classification attempts to accommodate leisure and recreational programs offered by municipal parks and recreation departments.

3. The classification applies to all educational levels--elementary, secondary, and postsecondary. This means that a program offered mostly by secondary schools, such as industrial arts, is included.

4. In order to provide continuity, ties to existing classification schemes are maintained as long as they do not violate other criteria. Although few degrees are awarded in embryology, the field has been maintained because it appears in the HEGIS Taxonomy.

5. The classification reflects the historical traditions of the various instructional program areas. Thus the category of home economics is quite detailed whereas law is not.

6. The structure reflects an institutional or organizational perspective because institutions are the data providers. (Examples related to this criterion are provided in the following section.)

Comparison between New and Old Classifications

The following comparisons can be made:

1. For the most part, the individual programs contained in both Handbook VI (at the six-digit level and above) and the HEGIS Taxonomy have been retained except for deletions required to eliminate duplication.

2. The levels of detail are the same as for the previous classifications--the apparent change in detail for the HEGIS categories (occasioned by the move from a four- to six-digit code) results from the addition of an intermediate level of aggregation rather than from the addition of more detailed subcategories.

3. The groupings of programs have been changed in some cases to better distinguish between programs having different purposes.

4. New categories have been added both to update previous classifications and to include programs such as leisure and recreation programs not encompassed by the previous classifications.

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Describing the Classification

The Classification consists of two independent dimensions, one for *program purpose* and the other for *program category*. Additional detail for the program category dimension is given in chapter 2, and definitions for program categories as well as program purposes are given in chapter 3.

Program Purpose Dimension

The categorization scheme for program purposes distinguishes between programs solely on the basis of whether or not they culminate in a formal award, such as a degree, diploma, or certificate. Although simplistic, this dichotomy has several virtues. First, it reflects a distinction assumed by institutions in describing their programs as "degree" or "nondegree". Second, this distinction further reflects the way institutions collect and report data on program enrollment and completion. Finally, unlike other alternatives, the distinction between "degree" and "nondegree" programs is operational. A search of college catalogs will typically reveal such formal statements of program purposes and objectives as to enhance the quality of life, to promote democratic ideals, to develop the whole person, and to prepare individuals for employment in particular occupations. While such statements may be more descriptive of ultimate program goals, no consensus exists that would result in standard categories along these lines. Further distinctions are needed within the two categories of program purpose. It is necessary, for example, to know whether a program results in a high school diploma or a Ph.D. In short, it is crucial to distinguish program levels within the program purpose categories. For programs culminating in formal awards, subcategories are expressed in terms of the particular award granted upon program completion, such as high school diploma or baccalaureate degree.[3] For programs not resulting in a formal award, level distinctions are often not made. In instances where level distinctions are useful or necessary, programs can be categorized as "introductory", "intermediate", or "advanced". (See table 1 for a complete listing of program purpose subdivisions.)

The discussion of program purpose would not be complete without addressing the question of "purpose as identified by whom"? This question can be answered from at least three different perspectives--that of the individual learner, that of society itself, and that of the institution providing the program.

[3]Further distinctions within award programs, such as grade-level descriptors, are often used. Such descriptors perhaps more appropriately describe the progress of an individual vis-a-vis a program rather than the program itself. Nevertheless, there are many instances in which all individuals at a particular grade level take the same educational program–for example, the first year of medical school. In such cases, grade-level distinctions can legitimately be used to identify and classify instructional programs.

Table 1. Program Purpose Dimension

Award Programs

1.0 Elementary/Secondary Programs
- *1.1 Elementary School Program*
- *1.2 Junior High School Program*
- *1.3 High School Diploma Program*

2.0 Postsecondary Certificates/Diplomas/Degrees
- *2.1 Postsecondary Certificate or Diploma (less than one year)*
- *2.2 Postsecondary Certificate or Diploma (one year or more but less than four years)*
- *2.3 Associate Degree*
- *2.4 Baccalaureate Degree*

3.0 First-Professional Certificates/Degrees
- *3.1 First-Professional Degree*
- *3.2 Post-Professional Certificate*

4.0 Graduate Certificates/Degrees
- *4.1 Graduate Certificate*
- *4.2 Master's Degree*
- *4.3 Intermediate Graduate Degree*
- *4.4 Doctoral Degree*
- *4.5 Post-Doctoral Award*

Nonformal Award Programs

5.0 Nonformal Award Programs

The reasons learners give for participating in an educational experience are varied. This provides a difficult basis for classifying program purposes in a standardized way. A second perspective, that of society, asks what the societal benefits are of continued investment in education. The difficulty with this perspective is that societal objectives are too broadly stated to be of assistance in classifying program purposes.[4] For this classification, the third perspective--that of the institution providing the instructional program--will be used. This choice is made purely on pragmatic grounds. The preponderance of data about instructional programs is collected from institutions, not individual students. Since we have little choice but to adopt the institution's perspective if the resulting data are to be interpreted with any consistency, program purpose should be interpreted as the purpose or objective intended by the institution offering the program.

[4]See the statements of social objectives incorporated in: Carnegie Commission on Higher Education. *The Purposes and the Performance of Higher Education in the United States: Approaching the Year 2000* (New York: McGraw Hill, 1973); Christoffel, Pamela, and Rice, Lois. *Federal Policy Issues and Data Needs in Postsecondary Education,* U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, NCES 76-238. Washington, D.C.: U.S. Government Printing Office, 1976; *The Second Newman Report: National Policy and Higher Education.* Report of a Special Task Force to the Secretary of Health, Education, and Welfare (Cambridge, Ma.: The MIT Press, 1973).

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Program Category Dimension

The second dimension of the classification is that which distinguishes programs that differ substantively in the blend of their subject matter content. There also exists a large number of instructional programs that differ in subtle ways. Because of the practical limitations of large-scale data collection, structural simplicity became the guiding principle for this dimension, which took the form of a simple alphabetical listing of major program categories. (See table 2 for a complete list of the program category subdivisions.)

Table 2. Program Category Dimension

Agriculture
- 01. Agribusiness and Agricultural Production
- 02. Agricultural Sciences
- 03. Renewable Natural Resources

Architecture and Environmental Design
- 04. Architecture and Environmental Design

Area and Ethnic Studies
- 05. Area and Ethnic Studies

Business
- 06. Business and Management
- 07. Business and Office
- 08. Marketing and Distribution

Communications
- 09. Communications
- 10. Communications Technologies

Computer and Information Sciences
- 11. Computer and Information Sciences

Consumer, Personal, and Miscellaneous Services
- 12. Consumer, Personal, and Miscellaneous Services

Education
- 13. Education

Engineering
- 14. Engineering
- 15. Engineering and Engineering-Related Technologies

Foreign Languages
- 16. Foreign Languages

Health
- 17. Allied Health
- 18. Health Sciences

Home Economics
- 19. Home Economics
- 20. Vocational Home Economics

Industrial Arts
- 21. Industrial Arts

Law
- 22. Law

Letters
- 23. Letters

Liberal/General Studies
- 24. Liberal/General Studies

Library and Archival Sciences
- 25. Library and Archival Sciences

Life Sciences
- 26. Life Sciences

Mathematics
- 27. Mathematics

Military Sciences
- 28. Military Sciences
- 29. Military Technologies

Multi/Interdisciplinary Studies
- 30. Multi/Interdisciplinary Studies

Parks and Recreation
- 31. Parks and Recreation

Personal and Social Development
- 32. Basic Skills
- 33. Citizenship/Civic Activities
- 34. Health-Related Activities
- 35. Interpersonal Skills
- 36. Leisure and Recreational Activities
- 37. Personal Awareness

Philosophy, Religion, and Theology
- 38. Philosophy and Religion
- 39. Theology

Physical Sciences
- 40. Physical Sciences
- 41. Science Technologies

Psychology
- 42. Psychology

Public Affairs and Protective Services
- 43. Protective Services
- 44. Public Affairs

Social Sciences
- 45. Social Sciences

Trade and Industrial
- 46. Construction Trades
- 47. Mechanics and Repairers
- 48. Precision and Production
- 49. Transportation and Material Moving

Visual and Performing Arts
- 50. Visual and Performing Arts

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Principles Influencing Development of Program Categories

The two operating principles that influenced the development of major program categories were:

1. Substantive differences take precedence over program prevalence or popularity. This means that program categories with distinctive subject matter configurations were included as separate entries, even though available data suggest that certain programs have relatively few enrollments or graduates. Thus "military sciences" programs receive equal billing with "social sciences". As a consequence of this guideline, the classification is uneven in the level of detail within program categories.

2. Overly fine distinctions among program categories were avoided. In cases where distinctions might be called for on conceptual grounds, but the distinctions were particularly subtle or were considered infeasible to apply and maintain in common usage, separate program categories were not included. To illustrate, specialties within "psychology" were maintained as separate categories even though within a given specialty some programs might have more clinical emphasis than others and thus possibly warrant a separate category.

The classification that has emerged represents an attempt to be both conceptually sound and pragmatic. When these criteria were found to be in conflict the dilemmas were resolved in favor of what would best facilitate data collection and interpretation.

Independence of the Dimensions

In conclusion, it should be reiterated that the program purpose and program category dimensions are independent. Selecting a category from one dimension is not dependent in any way upon selecting a category from the other dimension. The past practice of reserving certain program categories for use in conjunction with programs of only one purpose or level has been eliminated. For example, there is nothing inherent in the program category dimension that automatically assumes a given vocational education program is taught exclusively at either the secondary education or associate or bachelor's degree level. While certain program categories will probably be used predominately in conjunction with selected program purposes or levels, this practice should not be viewed as exclusive or mandatory.

Some Notes About Coding Programs

Those familiar with the HEGIS Taxonomy will recognize that the program category dimension of the classification contains three levels of detail instead of the customary two. However, the classification is conceptually more sound because of the additional level of detail.

A convention has been followed concerning how the three levels of the program category dimension are defined. The definitions of all two-digit elements of this dimension begin with the words "a summary of groups of instructional programs", while the definitions of all four-digit elements begin with "a group of instructional programs". At the six-digit level of detail, all definitions begin with the words "an instructional program". Thus, by definition, an instructional program can only be coded at the six-digit level. This technicality explains why numerous four-digit programs have only one six-digit subdivision: it was necessary to add the six-digit entry for uniformity so that an individual instructional program under the four-digit "group of programs" would have a six-digit code by which to be classified.

Another area of concern existed in cases where there were occurrences of programs that logically could be classified under two or more two-digit categories. In most cases, a judgement was made as to which two-digit category more closely followed historical tradition or modern consensus. In other instances, a general principle was applied where appropriate. Simply stated, the principle is that programs that take much of their emphasis from one instructional area and apply that emphasis or perspective to another, are classified under the applied area. For example, although instructional program 06.1706, Real Estate Law, derives much of its subject matter from law, it is classified under category 06, business, because real estate, a subdivision of business, represents the area to which the subject matter of law is applied in this particular instance.

The following list highlights some of the occurrences alluded to in the previous paragraph:

- Agricultural Business (01.0102) and Agricultural Economics (01.0103) are classified under Agriculture instead of Business;
- Forest Engineering (03.0504) is classified under Agriculture instead of Engineering;
- Interior Design (04.0501) is classified under Architecture and Environmental Design instead of Home Economics; and
- Management Information Systems (06.1201) is classified under Business instead of Computer and Information Sciences

Cases also exist where programs are cross-referenced from one, two-digit grouping to another. This is done in cases where programs have historically been classified in either of two places, but for sake of achieving exclusivity they were put in one location. The cross-reference allows for ease in locating these programs.

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One further note should be made about the program category dimension. There was no attempt to include within this framework programs that combine education and work. These programs, commonly referred to as "Experiential Education", are defined as "a set of planned educational experiences designed to enable learners to acquire attitudes, skills, and knowledge for work and other life roles by participating in work settings". It includes four major types of programs: Cooperative Vocational Education, Work Experience Education, Career Exploration, and Work Study Programs. If the demand for information concerning these types of programs arises, appropriate steps will be taken to incorporate them into the existing framework of the classification. However, they do not currently fall within the criteria that was established for designing this classification.

Conventions for Classifying Selected Programs

Undoubtedly some instructional programs may be difficult to match with this classification. The following guidelines deal with the proper classification of certain frequently encountered programs of this kind as well as unusual programs for which no appropriate categories are included in the classification. The guidelines are presented topic by topic:

1. *Classifying High School Programs Leading to a Diploma*

   General academic or college preparatory programs should be classified:
   - Award, High School Diploma (purpose)
   - Liberal/General Studies (program category)

   Occupational/vocational programs resulting in a high school diploma are classified:
   - Award, High School Diploma (purpose)
   - Appropriate Program Category

2. *Classifying Baccalaureate Transfer Program Offered by a Community College*

   If the program is a general-purpose program, it should be classified
   - Award, Associate, assuming a two-year program (purpose)
   - Liberal/General Studies (program category)

   If the program is designed to fulfull the first two years' requirements for a degree in a particular field (e.g., education or business), it should be classified:
   - Award, Associate (purpose)
   - Appropriate Program Category

3. *Classifying General Educational Development (GED) Programs*

   Classified similarly to high school diplomas, that is:
   - Award, High School Diploma (purpose)
   - Liberal/General Studies (program category)

4. *Classifying Adult Basic Education*

   These programs should be classified:
   - Nonformal Award (purpose)
   - Basic Skills (program category)

5. *Classifying Continuing Professional Education*

   Most such programs are designed to update professionals practicing in their chosen field and are not credit courses that can be applied toward a degree in that field. As a result, programs commonly labeled "Continuing Professional Education Programs" should be classified:
   - Nonformal Award (purpose)
   - Appropriate Program Category

   If a program labeled a "Continuing Professional Education" course is, in reality, part of a degree program, then it should be classified:
   - Award, Appropriate Level (purpose)
   - Appropriate Program Category

6. *Classifying Occupational Updating Programs*

   These should be classified in a fashion similar to continuing professional education programs. If they are not intended to lead to a degree or certificate, then they should be classified:
   - Nonformal Award (purpose)
   - Appropriate Program Category

   If the occupational updating program is designed to culminate in a degree or certificate, then it should be classified:
   - Award, Appropriate Level (purpose)
   - Appropriate Program Category

7. *Using "General" Program Subcategories*

   Many of the program categories in the structure have a "general" subcategory (for example, 02.0101, "Agricultureal Sciences, General"). This subcategory should be used only in those instances in which it is appropriate to connote program content covering two or more other subcategories within that category. It should not be used as a substitute for an "other" subcategory.

8. *Classifying "Other" Programs*

   Many, if not all, providers of educational programs will have at least one instructional program for which there is no appropriate program element in the structure. We recommend that institutional users, for internal purposes, assign a unique number to this program within the appropriate major program category (starting from XX.78 and using sequentially decreasing codes, as necessary); however, for external purposes they should report these as XX.9999, Other. In this context, the "other" rather than the "general" subcategory should be used.

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Contents of the Classification

As stated previously, chapter 2 contains a list of all subdivisions of the program purpose and program category dimensions. Chapter 3 provides a definition for each term appearing in chapter 2. Appendix A lists all existing NCES terminology publications. To provide continuity with classifications currently in use, appendixes B and C comprise crosswalks between the new classification and the HEGIS Taxonomy and the Handbook VI vocational programs, respectively. Appendix D lists those categories of the classification that are recognized as vocational education programs currently supported under the Vocational Education Act of 1963, as amended. Appendix E lists the major contributors to the new classification and Appendix F is a glossary. An index is also included for the reader's convenience. It identifies programs by the codes used in chapters 2 and 3 rather than by page number.

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Chapter II

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Coded Classification of Instructional Programs

Program Purpose Dimension

Award Programs

1.0 Elementary/Secondary Programs

1.1 Elementary School Program

1.2 Junior High School Program

1.3 High School Diploma Program

2.0 Postsecondary Certificates/Diplomas/Degrees

2.1 Postsecondary Certificate or Diploma (less than one year)

2.2 Postsecondary Certificate or Diploma (one year or more but less than four years)

2.3 Associate Degree

2.4 Baccalaureate Degree

3.0 First-Professional Certificates/Degrees

3.1 First-Professional Degree

3.2 Post-Professional Certificate

4.0 Graduate Certificates/Degrees

4.1 Graduate Certificate

4.2 Master's Degree

4.3 Intermediate Graduate Degree

4.4 Doctoral Degree

4.5 Post-Doctoral Award

Nonformal Award Programs

5.0 Nonformal Award Programs

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Program Category Dimension

Agriculture

01. Agribusiness and Agricultural Production

01.01 Agricultural Business and Management
- *01.0101 Agricultural Business and Management, General*
- *01.0102 Agricultural Business*
- *01.0103 Agricultural Economics*
- *01.0104 Farm and Ranch Management*
- *01.0199 Agricultural Business and Management, Other*

01.02 Agricultural Mechanics
- *01.0201 Agricultural Mechanics, General*
- *01.0202 Agricultural Electrification, Power, and Controls*
- *01.0203 Agricultural Mechanics, Construction, and Maintenance Skills*
- *01.0204 Agricultural Power Machinery*
- *01.0205 Agricultural Structures, Equipment, and Facilities*
- *01.0206 Soil and Water Mechanical Practices*
- *01.0299 Agricultural Mechanics, Other*

01.03 Agricultural Production
- *01.0301 Agricultural Production, General*
- *01.0302 Animal Production*
- *01.0303 Aquaculture*
- *01.0304 Crop Production*
- *01.0305 Game Farm Management*
- *01.0399 Agricultural Production, Other*

01.04 Agricultural Products and Processing
- *01.0401 Agricultural Products and Processing, General*
- *01.0402 Food Products*
- *01.0403 Nonfood Products*
- *01.0499 Agricultural Products and Processing, Other*

01.05 Agricultural Services and Supplies
- *01.0501 Agricultural Services and Supplies, General*
- *01.0502 Agricultural Services*
- *01.0503 Agricultural Supplies Marketing*
- *01.0504 Animal Grooming*
- *01.0505 Animal Training*
- *01.0506 Horseshoeing*
- *01.0599 Agricultural Services and Supplies, Other*

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01.06 ***Horticulture***

01.0601 Horticulture, General
01.0602 Arboriculture
01.0603 Floriculture
01.0604 Greenhouse Operation and Management
01.0605 Landscaping
01.0606 Nursery Operation and Management
01.0607 Turf Management
01.0699 Horticulture, Other

01.07 ***International Agriculture***

01.0701 International Agriculture

01.99 ***Agribusiness and Agricultural Production, Other***

01.9999 Agribusiness and Agricultural Production, Other

02. Agricultural Sciences

02.01 ***Agricultural Sciences, General***

02.0101 Agricultural Sciences, General

02.02 ***Animal Sciences***

02.0201 Animal Sciences, General
02.0202 Animal Breeding and Genetics
02.0203 Animal Health
02.0204 Animal Nutrition
02.0205 Animal Physiology
02.0206 Dairy
02.0207 Fisheries Science
02.0208 Livestock
02.0209 Poultry
02.0299 Animal Sciences, Other

02.03 ***Food Sciences***

02.0301 Food Sciences, General
02.0302 Dairy Processing
02.0303 Food Distribution
02.0304 Food Engineering
02.0305 Food Packaging
02.0306 Food Technology
02.0399 Food Sciences, Other

02.04 ***Plant Sciences***

02.0401 Plant Sciences, General
02.0402 Agronomy
02.0403 Horticulture Science
02.0404 Ornamental Horticulture
02.0405 Plant Breeding and Genetics
02.0406 Plant Pathology (Applied)
02.0407 Plant Physiology
02.0408 Plant Protection (Pest Management)
02.0409 Range Management
02.0410 Turf Management Science
02.0499 Plant Sciences, Other

02.05 ***Soil Sciences***

02.0501 Soil Sciences, General
02.0502 Soil Chemistry
02.0503 Soil Conservation
02.0504 Soil Management and Fertility
02.0505 Soil Microbiology
02.0506 Soil Physics
02.0599 Soil Sciences, Other

02.99 ***Agricultural Sciences, Other***

02.9999 Agricultural Sciences, Other

03. Renewable Natural Resources

03.01 ***Renewable Natural Resources, General***

03.0101 Renewable Natural Resources, General

03.02 ***Conservation and Regulation***

03.0201 Conservation and Regulation, General
03.0202 Conservation
03.0203 Resources Protection and Regulation
03.0299 Conservation and Regulation, Other

03.03 ***Fishing and Fisheries***

03.0301 Fishing and Fisheries, General
------- Commercial Fishing Operation (see 49.0303)
03.0302 Fisheries
03.0399 Fishing and Fisheries, Other

03.04 ***Forestry Production and Processing***

03.0401 Forestry Production and Processing, General
03.0402 Forest Production
03.0403 Forest Products Utilization
03.0404 Forest Products Processing Technology
03.0405 Logging
03.0406 Pulp and Paper Production
03.0499 Forestry Production and Processing, Other

03.05 ***Forestry and Related Sciences***

03.0501 Forestry and Related Sciences, General
03.0502 Forestry Science
03.0503 Forest Biology
03.0504 Forest Engineering
03.0505 Forest Hydrology
03.0506 Forest Management
03.0507 Forest Mensuration
03.0508 Urban Forestry
03.0509 Wood Science
03.0599 Forestry and Related Sciences, Other

03.06 ***Wildlife Management***

03.0601 Wildlife Management

03.99 ***Renewable Natural Resources, Other***

03.9999 Renewable Natural Resources, Other

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Architecture and Environmental Design

04. Architecture and Environmental Design

04.01 ***Architecture and Environmental Design, General***
- *04.0101 Architecture and Environmental Design, General*

04.02 ***Architecture***
- *04.0201 Architecture*

04.03 ***City, Community, and Regional Planning***
- *04.0301 City, Community, and Regional Planning*

04.04 ***Environmental Design***
- *04.0401 Environmental Design*

04.05 ***Interior Design***
- *04.0501 Interior Design*

04.06 ***Landscape Architecture***
- *04.0601 Landscape Architecture*

04.07 ***Urban Design***
- *04.0701 Urban Design*

04.99 ***Architecture and Environmental Design, Other***
- *04.9999 Architecture and Environmental Design, Other*

Area and Ethnic Studies

05. Area and Ethnic Studies

05.01 ***Area Studies***
- *05.0101 African Studies*
- *05.0102 American Studies*
- *05.0103 Asian Studies, General*
- *05.0104 East Asian Studies*
- *05.0105 Eastern European Studies*
- *05.0106 European Studies, General*
- *05.0107 Latin American Studies*
- *05.0108 Middle Eastern Studies*
- *05.0109 Pacific Area Studies*
- *05.0110 Russian and Slavic Studies*
- *05.0111 Scandinavian Studies*
- *05.0112 South Asian Studies*
- *05.0113 Southeast Asian Studies*
- *05.0114 Western European Studies*
- *05.0199 Area Studies, Other*

05.02 ***Ethnic Studies***
- *05.0201 Afro-American (Black) Studies*
- *05.0202 American Indian Studies*
- *05.0203 Hispanic-American Studies*
- *05.0204 Islamic Studies*
- *05.0205 Jewish Studies*
- *05.0299 Ethnic Studies, Other*

05.99 ***Area and Ethnic Studies, Other***
- *05.9999 Area and Ethnic Studies, Other*

Business

06. Business and Management

06.01 ***Business and Management, General***
- *06.0101 Business and Management, General*

06.02 ***Accounting***
- *06.0201 Accounting*

06.03 ***Banking and Finance***
- *06.0301 Banking and Finance*

06.04 ***Business Administration and Management***
- *06.0401 Business Administration and Management, General*
- *06.0402 Contract Managment and Procurement/ Purchasing*
- *06.0403 Product Management*
- *06.0404 Systems Efficiency Analysis*
- *06.0499 Business Administration and Management, Other*

06.05 ***Business Economics***
- *06.0501 Business Economics*

06.06 ***Human Resources Development***
- *06.0601 Human Resources Development*

06.07 ***Institutional Management***
- *06.0701 Hotel/Motel Management*
- *06.0702 Recreational Enterprises Management*
- *06.0703 Resort Management*
- *06.0704 Restaurant Management*
- *06.0705 Transporation Management*
- *06.0799 Institutional Management, Other*

06.08 ***Insurance and Risk Management***
- *06.0801 Insurance and Risk Management*

06.09 ***International Business Management***
- *06.0901 International Business Managment*

06.10 ***Investments and Securities***
- *06.1001 Investments and Securities*

06.11 ***Labor/Industrial Relations***
- *06.1101 Labor/Industrial Relations*

06.12 ***Management Information Systems***
- *06.1201 Management Information Systems*

06.13 ***Management Science***
- *06.1301 Business Statistics*
- *06.1302 Operations Research (Quantitative Methods)*
- *06.1399 Management Science, Other*

06.14 ***Marketing Management and Research***
- *06.1401 Marketing Management*
- *06.1402 Marketing Research*
- *06.1499 Marketing Management and Research, Other*

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06.15 ***Organizational Behavior***
06.1501 *Organizational Behavior*

06.16 ***Personnel Management***
06.1601 *Personnel Management*

06.17 ***Real Estate***
06.1701 *Real Estate, General*
06.1702 *Commercial Property*
06.1703 *Property Management*
06.1704 *Real Estate Appraisal*
06.1705 *Real Estate Finance*
06.1706 *Real Estate Law*
06.1707 *Residential Property*
06.1799 *Real Estate, Other*

06.18 ***Small Business Management and Ownership***
06.1801 *Small Business Management*
06.1802 *Small Business Ownership*
06.1899 *Small Business Management and Ownership, Other*

06.19 ***Taxation***
06.1901 *Taxation*

06.20 ***Trade and Industrial Supervision and Management***
06.2001 *Trade and Industrial Supervision and Management*

06.99 ***Business and Management, Other***
06.9999 *Business and Management, Other*

07. Business and Office

07.01 ***Accounting, Bookkeeping, and Related Programs***
07.0101 *Accounting, Bookkeeping, and Related Programs, General*
07.0102 *Accounting and Computing*
07.0103 *Bookkeeping*
07.0104 *Machine Billing, Bookkeeping, and Computing*
07.0199 *Accounting, Bookkeeping, and Related Programs, Other*

07.02 ***Banking and Related Financial Programs***
07.0201 *Banking and Related Financial Programs, General*
07.0202 *Credit Collection Clerk*
07.0203 *Insurance Clerk*
07.0204 *Loan Clerk*
07.0205 *Teller*
07.0206 *Transit Clerk*
07.0299 *Banking and Related Financial Programs, Other*

07.03 ***Business Data Processing and Related Programs***
07.0301 *Business Data Processing and Related Programs, General*
07.0302 *Business Computer and Console Operation*
07.0303 *Business Data Entry Equipment Operation*
07.0304 *Business Data Peripheral Equipment Operation*
07.0305 *Business Data Programming*
07.0306 *Business Systems Analysis*
07.0399 *Business Data Processing and Related Programs, Other*

07.04 ***Office Supervision and Management***
07.0401 *Office Supervision and Management*

07.05 ***Personnel and Training Programs***
07.0501 *Personnel and Training Programs, General*
07.0502 *Educational Assisting and Training*
07.0503 *Personnel Assisting*
07.0599 *Personnel and Training Programs, Other*

07.06 ***Secretarial and Related Programs***
07.0601 *Secretarial and Related Programs, General*
07.0602 *Court Reporting*
07.0603 *Executive Secretarial*
07.0604 *Legal Secretarial*
07.0605 *Medical Secretarial*
07.0606 *Secretarial*
07.0607 *Stenographic*
07.0608 *Word Processing*
07.0699 *Secretarial and Related Programs, Other*

07.07 ***Typing, General Office, and Related Programs***
07.0701 *Typing, General Office, and Related Programs, General*
07.0702 *Clerk-Typist*
07.0703 *Correspondence Clerk*
07.0704 *Duplicating Machine Operation*
07.0705 *General Office Clerk*
07.0706 *Mail and Order Clerk*
07.0707 *Receptionist and Communication Systems Operation*
07.0708 *Shipping, Receiving, and Stock Clerk*
07.0709 *Traffic, Rate, and Transportation Clerk*
07.0710 *Typing*
07.0799 *Typing, General Office, and Related Programs, Other*

07.99 ***Business and Office, Other***
07.9999 *Business and Office, Other*

08. Marketing and Distribution

08.01 ***Apparel and Accessories Marketing***
08.0101 *Apparel and Accessories Marketing, General*
08.0102 *Fashion Merchandising*
08.0103 *Fashion Modeling*
08.0104 *Footwear Marketing*
08.0105 *Jewelry Marketing*
08.0199 *Apparel and Accessories Marketing, Other*

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08.02 ***Business and Personal Services Marketing***

08.0201 *Business and Personal Services Marketing, General*
- - - - - - - *Advertising (see 09.0201)*
08.0202 *Display*
08.0203 *Marketing of Business or Personal Services*
08.0299 *Business and Personal Services Marketing, Other*

08.03 ***Entrepreneurship***

08.0301 *Entrepreneurship, General*
- - - - - - - *Small Business Management (see 06.1801)*
- - - - - - - *Small Business Owership (see 06.1802)*

08.04 ***Financial Services Marketing***

08.0401 *Financial Services Marketing, General*
08.0402 *Banking Marketing*
08.0403 *Credit Marketing*
08.0404 *Credit Union Marketing*
08.0405 *Savings and Loan Marketing*
08.0406 *Securities and Commodities Marketing*
08.0499 *Financial Services Marketing, Other*

08.05 ***Floristry, Farm and Garden Supplies Marketing***

08.0501 *Floristry, Farm and Garden Supplies Marketing, General*
08.0502 *Farm and Garden Supplies Marketing*
08.0503 *Floristry*
08.0599 *Floristry, Farm and Garden Supplies Marketing, Other*

08.06 ***Food Marketing***

08.0601 *Food Marketing, General*
08.0602 *Convenience Store Marketing*
08.0603 *Specialty Foods Marketing*
08.0604 *Supermarket Marketing*
08.0605 *Wholesale Food Marketing*
08.0699 *Food Marketing, Other*

08.07 ***General Marketing***

08.0701 *Auctioneering*
08.0702 *Industrial Sales*
08.0703 *International Marketing*
- - - - - - - *Marketing Management (see 06.1401)*
- - - - - - - *Marketing Research (see 06.1402)*
08.0704 *Purchasing*
08.0705 *Retailing*
08.0706 *Sales*
08.0707 *Wholesaling*
08.0799 *General Marketing, Other*

08.08 ***Home and Office Products Marketing***

08.0801 *Home and Office Products Marketing, General*
08.0802 *Appliance Marketing*
08.0803 *Building Materials Marketing*
08.0804 *Floor Coverings, Draperies, and Upholstery Marketing*
08.0805 *Furniture Marketing*
08.0806 *Hardware Marketing*
08.0807 *Office Products and Equipment Marketing*
08.0808 *Specialty Home Furnishings Marketing*
08.0899 *Home and Office Products Marketing, Other*

08.09 ***Hospitality and Recreation Marketing***

08.0901 *Hospitality and Recreation Marketing, General*
- - - - - - - *Hotel/Motel Management (see 06.0701)*
08.0902 *Marketing of Hotel/Motel Services*
08.0903 *Marketing of Recreational Services*
- - - - - - - *Recreational Enterprises Management (see 06.0702)*
08.0904 *Recreational Products Marketing*
- - - - - - - *Resort Management (see 06.0703)*
- - - - - - - *Restaurant Management (see 06.0704)*
08.0905 *Waiter/Waitress and Related Services*
08.0999 *Hospitality and Recreation Marketing, Other*

08.10 ***Insurance Marketing***

08.1001 *Insurance Marketing, General*
08.1002 *Accident and Health Insurance Marketing*
08.1003 *Life Insurance Marketing*
08.1004 *Property and Casualty Insurance Marketing*
08.1099 *Insurance Marketing, Other*

- - - - - ***Real Estate (see 06.17)***

- - - - - - - *Real Estate, General (see 06.1701)*
- - - - - - - *Commercial Property (see 06.1702)*
- - - - - - - *Property Management (see 06.1703)*
- - - - - - - *Real Estate Appraisal (see 06.1704)*
- - - - - - - *Real Estate Finance (see 06.1705)*
- - - - - - - *Real Estate Law (see 06.1706)*
- - - - - - - *Residential Property (see 06.1707)*
- - - - - - - *Real Estate, Other (see 06.1799)*

08.11 ***Transportation and Travel Marketing***

08.1101 *Transporation and Travel Marketing, General*
08.1102 *Freight Transportation Marketing*
08.1103 *Passenger Transportation Marketing*
08.1104 *Tourism*
- - - - - - - *Transportation Management (see 06.0705)*
08.1105 *Travel Services Marketing*
06.1106 *Warehouse Services Marketing*
08.1199 *Transportation and Travel Marketing, Other*

08.12 ***Vehicles and Petroleum Marketing***

08.1201 *Vehicles and Petroleum Marketing, General*
08.1202 *Agricultural Implements and Machinery Marketing*
08.1203 *Automotive Vehicles and Accessories Marketing*
08.1204 *Petroleum Wholesaling*
08.1205 *Recreational Vehicles and Accessories Marketing*
08.1206 *Service Station Retailing*
08.1207 *Vehicle Rental and Leasing*
08.1299 *Vehicles and Petroleum Marketing, Other*

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08.99 ***Marketing and Distribution, Other***
08.9999 Marketing and Distribution, Other

Communications

09. Communications

09.01 ***Communications, General***
09.0101 Communications, General

09.02 ***Advertising***
09.0201 Advertising

09.03 ***Communications Research***
09.0301 Communications Research

09.04 ***Journalism (Mass Communications)***
09.0401 Journalism (Mass Communications)

09.05 ***Public Relations***
09.0501 Public Relations

09.06 ***Radio/Television News Broadcast***
09.0601 Radio/Television News Broadcast

09.07 ***Radio/Television, General***
09.0701 Radio/Television, General

09.99 ***Communications, Other***
09.9999 Communications, Other

10. Communication Technologies

10.01 ***Communication Technologies***
10.0101 Educational Media Technology
10.0102 Motion Picture Technology
10.0103 Photographic Technology
10.0104 Radio and Television Production and Broadcasting Technology
10.0199 Communication Technologies, Other

Computer and Information Sciences

11. Computer and Information Sciences

11.01 ***Computer and Information Sciences, General***
11.0101 Computer and Information Sciences, General

11.02 ***Computer Programming***
11.0201 Computer Programming

11.03 ***Data Processing***
11.0301 Data Processing

11.04 ***Information Sciences and Systems***
11.0401 Information Sciences and Systems

11.05 ***Systems Analysis***
11.0501 Systems Analysis

11.99 ***Computer and Information Sciences, Other***
11.9999 Computer and Information Sciences, Other

Consumer, Personal, and Miscellaneous Services

12. Consumer, Personal, and Miscellaneous Services

12.01 ***Drycleaning and Laundering Services***
12.0101 Drycleaning and Laundering Services, General
12.0102 Drycleaning
12.0103 Laundering
12.0199 Drycleaning and Laundering Services, Other

12.02 ***Entertainment Services***
12.0201 Entertainment Services, General
12.0202 Bartending
12.0203 Card Dealing
12.0204 Umpiring
12.0299 Entertainment Services, Other

12.03 ***Funeral Services***
12.0301 Funeral Services

12.04 ***Personal Services***
12.0401 Personal Services, General
12.0402 Barbering
12.0403 Cosmetology
12.0404 Electrolysis
12.0405 Massage
12.0499 Personal Services, Other

12.99 ***Consumer, Personal, and Miscellaneous Services, Other***
12.9999 Consumer, Personal, and Miscellaneous Services, Other

Education

13. Education

13.01 ***Education, General***
13.0101 Education, General

13.02 ***Bilingual/Bicultural Education***
13.0201 Bilingual/Bicultural Education

13.03 ***Curriculum and Instruction***
13.0301 Curriculum and Instruction

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13.04 *Education Administration*
- 13.0401 Education Administration, General
- 13.0402 Administration of Special Education
- 13.0403 Adult and Continuing Education Administration
- 13.0404 Educational Supervision
- 13.0405 Elementary and Secondary Education Administration
- 13.0406 Higher Education Administration
- 13.0407 Community College Education Administration
- 13.0499 Education Administration, Other

13.05 *Educational Media*
- 13.0501 Educational Media

13.06 *Evaluation and Research*
- 13.0601 Evaluation and Research, General
- 13.0602 Adult and Continuing Education Research
- 13.0603 Educational Statistics and Research
- 13.0604 Educational Testing, Evaluation, and Measurement
- 13.0605 Elementary and Secondary Research
- 13.0606 Higher Education Research
- 13.0699 Evaluation and Research, Other

13.07 *International and Comparative Education*
- 13.0701 International and Comparative Education

13.08 *School Psychology*
- 13.0801 School Psychology

13.09 *Social Foundations*
- 13.0901 Social Foundations

13.10 *Special Education*
- 13.1001 Special Education, General
- 13.1002 Education of the Culturally Disadvantaged
- 13.1003 Education of the Deaf and Hearing Impaired
- 13.1004 Education of the Gifted and Talented
- 13.1005 Education of the Emotionally Handicapped
- 13.1006 Education of the Mentally Handicapped
- 13.1007 Education of the Multiple Handicapped
- 13.1008 Education of the Physically Handicapped
- 13.1009 Education of the Visually Handicapped
- 13.1010 Remedial Education
- 13.1011 Specific Learning Disabilities
- 13.1012 Speech Correction
- 13.1099 Special Education, Other

13.11 *Student Counseling and Personnel Services*
- 13.1101 Student Counseling and Personnel Services

13.12 *Teacher Education, General Programs*
- 13.1201 Adult and Continuing Education
- 13.1202 Elementary Education
- 13.1203 Junior High Education
- 13.1204 Pre-Elementary Education
- 13.1205 Secondary Education
- 12.1299 Teacher Education, General Programs, Other

13.13 *Teacher Education, Specific Subject Areas*
- 13.1301 Agricultural Education
- 13.1302 Art Education
- 13.1303 Business Education
- 13.1304 Driver and Safety Education
- 13.1305 English Education
- 13.1306 Foreign Languages Education
- 13.1307 Health Education
- 13.1308 Home Economics Education
- 13.1309 Industrial Arts Education
- 13.1310 Marketing and Distributive Education
- 13.1311 Mathematics Education
- 13.1312 Music Education
- 13.1313 Nutritional Education
- 13.1314 Physical Education
- 13.1315 Reading Education
- 13.1316 Science Education
- 13.1317 Social Science Education
- 13.1318 Social Studies Education
- 13.1319 Technical Education
- 13.1320 Trade and Industrial Education
- 13.1399 Teacher Education, Specific Subject Areas, Other

13.14 *Teaching English as a Second Language/Foreign Language*
- 13.1401 Teaching English as a Second Language/ Foreign Language

13.99 *Education, Other*
- 13.9999 Education, Other

Engineering

14. Engineering

14.01 *Engineering, General*
- 14.0101 Engineering, General

14.02 *Aerospace, Aeronautical, and Astronautical Engineering*
- 14.0201 Aerospace, Aeronautical, and Astronautical Engineering

14.03 *Agricultural Engineering*
- 14.0301 Agricultural Engineering

14.04 *Architectural Engineering*
- 14.0401 Architectural Engineering

14.05 *Bioengineering and Biomedical Engineering*
- 14.0501 Bioengineering and Biomedical Engineering

14.06 *Ceramic Engineering*
- 14.0601 Ceramic Engineering

14.07 *Chemical Engineering*
- 14.0701 Chemical Engineering

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14.08 *Civil Engineering*
14.0801 Civil Engineering

14.09 *Computer Engineering*
14.0901 Computer Engineering

14.10 *Electrical, Electronics, and Communications Engineering*
14.1001 Electrical, Electronics, and Communications Engineering

14.11 *Engineering Mechanics*
14.1101 Engineering Mechanics

14.12 *Engineering Physics*
14.1201 Engineering Physics

14.13 *Engineering Science*
14.1301 Engineering Science

14.14 *Environmental Health Engineering*
14.1401 Environmental Health Engineering

14.15 *Geological Engineering*
14.1501 Geological Engineering

14.16 *Geophysical Engineering*
14.1601 Geophysical Engineering

14.17 *Industrial Engineering*
14.1701 Industrial Engineering

14.18 *Materials Engineering*
14.1801 Materials Engineering

14.19 *Mechanical Engineering*
14.1901 Mechanical Engineering

14.20 *Metallurgical Engineering*
14.2001 Metallurgical Engineering

14.21 *Mining and Mineral Engineering*
14.2101 Mining and Mineral Engineering

14.22 *Naval Architecture and Marine Engineering*
14.2201 Naval Architecture and Marine Engineering

14.23 *Nuclear Engineering*
14.2301 Nuclear Engineering

14.24 *Ocean Engineering*
14.2401 Ocean Engineering

14.25 *Petroleum Engineering*
14.2501 Petroleum Engineering

14.26 *Surveying and Mapping Sciences*
14.2601 Surveying and Mapping Sciences
14.2602 Cartography

14.27 *Systems Engineering*
14.2701 Systems Engineering

14.28 *Textile Engineering*
14.2801 Textile Engineering

14.99 *Engineering, Other*
14.9999 Engineering, Other

15. Engineering and Engineering-Related Technologies

15.01 *Architectural Technologies*
15.0101 Architectural Design and Construction Technology
15.0102 Architectural Interior Design Technology
15.0199 Architectural Technologies, Other

15.02 *Civil Technologies*
15.0201 Civil Technology
15.0202 Drafting and Design Technology
15.0203 Surveying and Mapping Technology
15.0204 Urban Planning Technology
15.0299 Civil Technologies, Other

15.03 *Electrical and Electronic Technologies*
15.0301 Computer Technology
15.0302 Electrical Technology
15.0303 Electronic Technology
15.0304 Laser Electro-Optic Technology
15.0399 Electrical and Electronic Technologies, Other

15.04 *Electromechanical Instrumentation and Maintenance Technologies*
15.0401 Biomedical Equipment Technology
15.0402 Computer Servicing Technology
15.0403 Electromechanical Technology
15.0404 Instrumentation Technology
15.0499 Electromechanical Instrumentation and Maintenance Technologies, Other

15.05 *Environmental Control Technologies*
15.0501 Air Conditioning, Heating, and Refrigeration Technology
15.0502 Air Pollution Control Technology
15.0503 Energy Conservation and Use Technology
15.0504 Sanitation Technology
15.0505 Solar Heating and Cooling Technology
15.0506 Water and Wastewater Technology
15.0599 Environmental Control Technologies, Other

15.06 *Industrial Production Technologies*
15.0601 Chemical Manufacturing Technology
15.0602 Food Processing Technology
15.0603 Industrial Technology
15.0604 Manufacturing Technology
15.0605 Marine Products Technology
15.0606 Optical Technology
15.0607 Plastic Technology
15.0608 Safety Technology
15.0609 Textile Technology
15.0610 Welding Technology
15.0699 Industrial Production Technologies, Other

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15.07 *Quality Control and Safety Technologies*
- 15.0701 Occupational Safety and Health Technology
- 15.0702 Quality Control Technology
- 15.0799 Quality Control and Safety Technologies, Other

15.08 *Mechanical and Related Technologies*
- 15.0801 Aeronautical Technology
- 15.0802 Agricultural Equipment Technology
- 15.0803 Automotive Technology
- 15.0804 Marine Propulsion Technology
- 15.0805 Mechanical Design Technology
- 15.0899 Mechanical and Related Technologies, Other

15.09 *Mining and Petroleum Technologies*
- 15.0901 Coal Mining Technology
- 15.0902 Mining (Excluding Coal) Technology
- 15.0903 Petroleum Technology
- 15.0999 Mining and Petroleum Technologies, Other

15.99 *Engineering and Engineering-Related Technologies, Other*
- 15.9999 Engineering and Engineering-Related Technologies, Other

Foreign Languages

16. Foreign Languages

16.01 *Foreign Languages, Multiple Emphasis*
- 16.0101 Foreign Languages, Multiple Emphasis

16.02 *African (Non-Semitic) Languages*
- 16.0201 African (Non-Semitic) Languages

16.03 *Asiatic Languages*
- 16.0301 Chinese
- 16.0302 Japanese
- 16.0303 Korean
- 16.0399 Asiatic Languages, Other

16.04 *Balto-Slavic Languages*
- 16.0401 Baltic Languages
- 16.0402 Russian
- 16.0403 Slavic Languages (Other than Russian)

16.05 *Germanic Languages*
- 16.0501 German
- 16.0502 Scandinavian Languages
- 16.0503 Yiddish
- 16.0599 Germanic Languages, Other

16.06 *Greek*
- 16.0601 Greek (Classical)
- 16.0602 Greek (Modern)

16.07 *Indic Languages*
- 16.0701 Hindi
- 16.0702 Sanskrit
- 16.0799 Indic Languages, Other

16.08 *Iranian Languages*
- 16.0801 Iranian Languages

16.09 *Italic Languages*
- 16.0901 French
- 16.0902 Italian
- 16.0903 Latin
- 16.0904 Portuguese
- 16.0905 Spanish
- 16.0999 Italic Languages, Other

16.10 *Native American Languages*
- 16.1001 Native American Languages

16.11 *Semitic Languages*
- 16.1101 Arabic
- 16.1102 Hebrew
- 16.1199 Semitic Languages, Other

16.99 *Foreign Languages, Other*
- 16.9999 Foreign Languages, Other

Health

17. Allied Health

17.01 *Dental Services*
- 17.0101 Dental Assisting
- 17.0102 Dental Hygiene
- 17.0103 Dental Laboratory Technology
- 17.0199 Dental Services, Other

17.02 *Diagnostic and Treatment Services*
- 17.0201 Cardiopulmonary Technology
- 17.0202 Dialysis Technology
- 17.0203 Electrocardiograph Technology
- 17.0204 Electroencephalograph Technology
- 17.0205 Emergency Medical Technology-Ambulance
- 17.0206 Emergency Medical Technology-Paramedic
- 17.0207 Medical Radiation Dosimetry
- 17.0208 Nuclear Medical Technology
- 17.0209 Radiograph Medical Technology
- 17.0210 Respiratory Therapy Technology
- 17.0211 Surgical Technology
- 17.0212 Ultrasound Technology
- 17.0299 Diagnostic and Treatment Services, Other

17.03 *Medical Laboratory Technologies*
- 17.0301 Blood Bank Technology
- 17.0302 Chemistry Technology
- 17.0303 Clinical Animal Technology
- 17.0304 Clinical Laboratory Aide
- 17.0305 Clinical Laboratory Assisting
- 17.0306 Cytotechnology
- 17.0307 Hematology Technology
- 17.0308 Histologic Technology
- 17.0309 Medical Laboratory Technology
- 17.0310 Medical Technology
- 17.0311 Microbiology Technology
- 17.0399 Medical Laboratory Technologies, Other

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17.04 *Mental Health/Human Services*
- 17.0401 Alcohol/Drug Abuse Specialty
- 17.0402 Community Health Work
- 17.0403 Genetic Counseling
- 17.0404 Home Health Aide
- ------- Medical Social Work (see 44.0702)
- 17.0405 Mental Health/Human Services Assisting
- 17.0406 Mental Health/Human Services Technology
- 17.0407 Rehabilitation Counseling
- 17.0408 Therapeutic Child Care Work
- 17.0499 Mental Health/Human Services, Other

17.05 *Miscellaneous Allied Health Services*
- 17.0501 Animal Technology
- 17.0502 Central Supply Technology
- 17.0503 Medical Assisting
- 17.0504 Medical Illustrating
- 17.0505 Medical Office Management
- 17.0506 Medical Records Technology
- 17.0507 Pharmacy Assisting
- 17.0508 Physician Assisting-Primary Care
- 17.0509 Physician Assisting-Specialty
- 17.0510 Podiatric Assisting
- 17.0511 Veterinarian Aide
- 17.0512 Veterinarian Assisting
- 17.0513 Ward Clerk
- 17.0599 Miscellanous Allied Health Services, Other

17.06 *Nursing-Related Services*
- 17.0601 Geriatric Aide
- 17.0602 Nursing Assisting
- 17.0603 Obstetrical Technology
- 17.0604 Pediatric Aide
- 17.0605 Practical Nursing
- 17.0606 Ward Service Management
- 17.0699 Nursing-Related Services, Other

17.07 *Opbthalmic Services*
- 17.0701 Ophthalmic Dispensing
- 17.0702 Ophthalmic Laboratory Technology
- 17.0703 Ophthalmic Medical Assisting
- 17.0704 Optometric Assisting
- 17.0705 Optometric Technology
- 17.0706 Orthoptics
- 17.0799 Ophthalmic Services, Other

17.08 *Rehabilitation Services*
- 17.0801 Art Therapy
- 17.0802 Corrective Therapy
- 17.0803 Dance Therapy
- 17.0804 Exercise Physiology
- 17.0805 Manual Arts Therapy
- 17.0806 Music Therapy
- 17.0807 Occupational Therapy
- 17.0808 Occupational Therapy Assisting
- 17.0809 Occupational Therapy Aide
- 17.0810 Orthotic/Prosthetic Assisting
- 17.0811 Orthotics/Prosthetics
- 17.0812 Orthopedic Assisting
- 17.0813 Physical Therapy
- 17.0814 Physical Therapy Aide
- 17.0815 Physical Therapy Assisting
- 17.0816 Recreational Therapy
- 17.0817 Recreational Therapy Technology
- 17.0818 Respiratory Therapy
- 17.0819 Respiratory Therapy Assisting
- 17.0820 Speech/Hearing Therapy Aide
- 17.0821 Speech-Language Pathology/Audiology
- ------- Therapeutic Recreation Aide (see 20.0607)
- 17.0899 Rehabilitation Services, Other

17.99 *Allied Health, Other*
- 17.9999 Allied Health, Other

18. Health Sciences

18.01 *Audiology and Speech Pathology*
- 18.0101 Audiology
- 18.0102 Speech Pathology
- 18.0103 Speech Pathology/Audiology
- 18.0199 Audiology and Speech Pathology, Other

18.02 *Basic Clinical Health Sciences*
- 18.0201 Clinical Anatomy
- 18.0202 Clinical Biochemistry
- 18.0203 Clinical Microbiology
- 18.0204 Clinical Pathology
- 18.0205 Physiology
- 18.0299 Basic Clinical Health Sciences, Other

18.03 *Chiropractic*
- 18.0301 Chiropractic

18.04 *Dentistry*
- 18.0401 Dentistry, General
- 18.0402 Dental Public Health
- 18.0403 Endodontics
- 18.0404 Oral/Maxial Facial Surgery
- 18.0405 Oral Pathology
- 18.0406 Orthodontics
- 18.0407 Pedodontics
- 18.0408 Periodontics
- 18.0409 Prosthodontics
- 18.0499 Dentistry, Other

18.05 *Emergency/Disaster Science*
- 18.0501 Emergency/Disaster Science

18.06 *Epidemiology*
- 18.0601 Epidemiology

18.07 *Health Sciences Administration*
- 18.0701 Health Care Administration
- 18.0702 Health Care Planning
- 18.0703 Medical Records Administration
- 18.0799 Health Sciences Administration, Other

18.08 *Hematology*
- 18.0801 Hematology

18.09 *Medical Laboratory*
- 18.0901 Medical Laboratory

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18.10	***Medicine***	
	18.1001	*Medicine, General*
	18.1002	*Allergies and Endomology*
	18.1003	*Anesthesiology*
	18.1004	*Colon and Rectal Surgery*
	18.1005	*Dermatology*
	18.1006	*Emergency Medicine*
	18.1007	*Family Practice*
	18.1008	*Geriatrics*
	18.1009	*Immunology*
	18.1010	*Internal Medicine*
	18.1011	*Neurological Surgery*
	18.1012	*Nuclear Medicine*
	18.1013	*Obstetrics and Gynecology*
	18.1014	*Ophthalmology*
	18.1015	*Orthodontic Surgery*
	18.1016	*Orthopedic*
	18.1017	*Otorhinolaryngology/Otolaryngology*
	18.1018	*Pathology*
	18.1019	*Pediatrics*
	18.1020	*Physical Medicine and Rehabilitation*
	18.1021	*Plastic Surgery*
	18.1022	*Preventive Medicine*
	18.1023	*Psychiatry*
	18.1024	*Neurology*
	18.1025	*Radiology*
	18.1026	*Surgery*
	18.1027	*Thoracic Surgery*
	18.1028	*Urology*
	18.1099	*Medicine, Other*
18.11	***Nursing***	
	18.1101	*Nursing, General*
	18.1102	*Anesthetist*
	18.1103	*Maternal/Child Health*
	18.1104	*Medical Surgical*
	18.1105	*Nursing Administration*
	18.1106	*Psychiatric/Mental Health*
	18.1107	*Public Health*
	18.1199	*Nursing, Other*
18.12	***Optometry***	
	18.1201	*Optometry*
18.13	***Osteopathic Medicine***	
	18.1301	*Osteopathic Medicine*
18.14	***Pharmacy***	
	18.1401	*Pharmacy*
18.15	***Podiatry***	
	18.1501	*Podiatry*
18.16	***Population and Family Planning***	
	18.1601	*Population and Family Planning*
18.17	***Pre-Dentistry***	
	18.1701	*Pre-Dentistry*
18.18	***Pre-Medicine***	
	18.1801	*Pre-Medicine*
18.19	***Pre-Pharmacy***	
	18.1901	*Pre-Pharmacy*
18.20	***Pre-Veterinary***	
	18.2001	*Pre-Veterinary*
18.21	***Prosectorial Science***	
	18.2101	*Prosectorial Science*
18.22	***Public Health Laboratory Science***	
	18.2201	*Public Health Laboratory Science*
18.23	***Toxicology (Clinical)***	
	18.2301	*Toxicology (Clinical)*
18.24	***Veterinary Medicine***	
	18.2401	*Veterinary Medicine*
18.99	***Health Sciences, Other***	
	18.9999	*Health Sciences, Other*

Home Economics

19.	**Home Economics**	
19.01	***Home Economics, General***	
	19.0101	*Home Economics, General*
19.02	***Business Home Economics***	
	19.0201	*Business Home Economics*
19.03	***Family and Community Services***	
	19.0301	*Family and Community Services, General*
	19.0302	*Nonformal Education (Extension, Adult/ Extended)*
	19.0303	*Family Services*
	19.0399	*Family and Community Services, Other*
19.04	***Family/Consumer Resource Management***	
	19.0401	*Family/Consumer Resource Management, General*
	19.0402	*Consumer Science*
	19.0403	*Family Economics*
	- - - - - - -	*Home Management (see 20.0109)*
	19.0499	*Family/Consumer Resource Management, Other*
19.05	***Food Sciences and Human Nutrition***	
	19.0501	*Food Sciences and Human Nutrition, General*
	19.0502	*Food/Food Sciences*
	19.0503	*Dietietics/Human Nutritional Services*
	19.0504	*Human Nutrition*
	19.0599	*Food Sciences and Human Nutrition, Other*
- - - - - - -	- - - - - - -	*Home Economics Education (see 13.1308)*

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19.06 *Human Environment and Housing*
- 19.0601 Human Environment and Housing, General
- 19.0602 Household Equipment
- 19.0603 Housing
- ------- Interior Design (see 04.0501)
- 19.0699 Human Environment and Housing, Other

19.07 *Individual and Family Development*
- 19.0701 Individual and Family Development, General
- 19.0702 Adult Development
- ------- Child Development, Care, and Guidance (see 20.0102)
- 19.0703 Family Counseling
- 19.0704 Family Relations
- 19.0705 Geriatric Services
- 19.0799 Individual and Family Development, Other

19.08 *International/Comparative Home Economics*
- 19.0801 International/Comparative Home Economics

19.09 *Textiles and Clothing*
- 19.0901 Textiles and Clothing, General
- 19.0902 Fashion Design
- 19.0903 Textiles and Clothing, Retail
- 19.0904 Textile Science
- 19.0999 Textiles and Clothing, Other

19.99 *Home Economics, Other*
- 19.9999 Home Economics, Other

20. Vocational Home Economics

20.01 *Consumer and Homemaking Home Economics*
- 20.0101 Comprehensive Consumer and Homemaking Home Economics
- 20.0102 Child Development, Care, and Guidance
- 20.0103 Clothing and Textiles
- 20.0104 Consumer Education
- 20.0105 Exploratory Homemaking
- 20.0106 Family/Individual Health
- 20.0107 Family Living and Parenthood
- 20.0108 Food and Nutrition
- 20.0109 Home Management
- 20.0110 Housing, Home Furnishing and Equipment
- 20.0199 Consumer and Homemaking Home Economics, Other

20.02 *Child Care and Guidance Management and Services*
- 20.0201 Child Care and Guidance Management and Services, General
- 20.0202 Child Care Aide/Assisting
- 20.0203 Child Care Management
- 20.0204 Foster Care/Family Care
- 20.0205 Teacher Aide
- 20.0299 Child Care and Guidance Management and Services, Other

20.03 *Clothing, Apparel, and Textiles Management, Production, and Services*
- 20.0301 Clothing, Apparel, and Textiles Management, Production, and Services, General
- 20.0302 Clothing Maintenance Aide
- 20.0303 Commercial Garment and Apparel Construction
- 20.0304 Custom Apparel/Garment Seamstress
- 20.0305 Custom Tailoring and Alteration
- 20.0306 Fashion/Fabric Coordination
- 20.0307 Textiles Testing
- 20.0308 Wedding/Specialty Consulting
- 20.0399 Clothing, Apparel, and Textiles Management, Production, and Services, Other

20.04 *Food Production, Management, and Services*
- 20.0401 Food Production, Management, and Services, General
- 20.0402 Baking
- 20.0403 Chef/Cook
- 20.0404 Dietetic Aide/Assisting
- 20.0405 Food Catering
- 20.0406 Food Service
- 20.0407 Food Testing
- 20.0408 School Food Service
- 20.0499 Food Production, Management, and Services, Other

20.05 *Home Furnishings and Equipment Management, Production, and Services*
- 20.0501 Home Furnishings and Equipment Management, Production, and Services, General
- 20.0502 Custom Drapery and Window Treatment Design/Making
- 20.0503 Custom Slipcovering and Upholstering
- 20.0504 Floral Design
- 20.0505 Home Decorating
- 20.0506 Home Furnishings Aide
- 20.0507 Home-Service Assisting
- 20.0599 Home Furnishings and Equipment Management, Production, and Services, Other

20.06 *Institutional, Home Management, and Supporting Services*
- 20.0601 Institutional, Home Management, and Supporting Services, General
- 20.0602 Companion to the Aged
- 20.0603 Consumer Aide/Assisting
- 20.0604 Custodial Services
- 20.0605 Executive Housekeeping
- 20.0606 Homemaker's Aide
- 20.0607 Therapeutic Recreation Aide
- 20.0699 Institutional, Home Management, and Supporting Services, Other

20.99 *Vocational Home Economics, Other*
- 20.9999 Vocational Home Economics, Other

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Industrial Arts

21. Industrial Arts

21.01 Industrial Arts
- *21.0101 Industrial Arts, General*
- *21.0102 Construction*
- *21.0103 Drafting and Design*
- *21.0104 Electricity/Electronics*
- *21.0105 Energy, Power, and Transportation*
- *21.0106 Graphic Arts*
- *21.0107 Manufacturing/Materials Processing*
- *21.0199 Industrial Arts, Other*

Law

22. Law

22.01 Law
- *22.0101 Law*
- *22.0102 Pre-Law*
- *22.0103 Legal Assisting*
- *22.0199 Law, Other*

Letters

23. Letters

23.01 English, General
- *23.0101 English, General*

23.02 Classics
- *23.0201 Classics*

23.03 Comparative Literature
- *23.0301 Comparative Literature*

23.04 Composition
- *23.0401 Composition*

23.05 Creative Writing
- *23.0501 Creative Writing*

23.06 Linguistics (Includes Phonetics, Semantics, and Philology)
- *23.0601 Linguistics (Includes Phonetics, Semantics, and Philology)*

23.07 Literature, American
- *23.0701 Literature, American*

23.08 Literature, English
- *23.0801 Literature, English*

23.09 Rhetoric
- *23.0901 Rhetoric*

23.10 Speech, Debate, and Forensics
- *23.1001 Speech, Debate, and Forensics*

23.11 Technical and Business Writing
- *23.1101 Technical and Business Writing*

23.99 Letters, Other
- *23.9999 Letters, Other*

Liberal/General Studies

24. Liberal/General Studies

24.01 Liberal/General Studies
- *24.0101 Liberal/General Studies*
- *24.0199 Liberal/General Studies, Other*

Library and Archival Sciences

25. Library and Archival Sciences

25.01 Library and Archival Sciences, General
- *25.0101 Library and Archival Sciences, General*

25.02 Archival Science
- *25.0201 Archival Science*

25.03 Library Assisting
- *25.0301 Library Assisting*

25.04 Library Science
- *25.0401 Library Science*

25.05 Museology
- *25.0501 Museology*

25.99 Library and Archival Sciences, Other
- *25.9999 Library and Archival Sciences, Other*

Life Sciences

26. Life Sciences

26.01 Biology, General
- *26.0101 Biology, General*

26.02 Biochemistry and Biophysics
- *26.0201 Biochemistry and Biophysics*

26.03 Botany
- *26.0301 Botany, General*
- *26.0302 Bacteriology*
- *26.0303 Mycology*
- *26.0304 Plant Genetics*
- *26.0305 Plant Pathology*
- *26.0306 Plant Pharmacology*
- *26.0307 Plant Physiology*
- *26.0399 Botany, Other*

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26.04 ***Cell and Molecular Biology***
26.0401 Cell Biology
26.0402 Molecular Biology
26.0499 Cell and Molecular Biology, Other

26.05 ***Microbiology***
26.0501 Microbiology

26.06 ***Miscellaneous Specialized Areas, Life Sciences***
26.0601 Anatomy
26.0602 Biometrics and Biostatistics
26.0603 Ecology
26.0604 Embryology
26.0605 Endocrinology
26.0606 Histology
26.0607 Marine Biology
26.0608 Neurosciences
26.0609 Nutritional Sciences
26.0610 Parasitology
26.0611 Radiobiology
26.0612 Toxicology
26.0699 Miscellaneous Specialized Areas, Life Sciences, Other

26.07 ***Zoology***
26.0701 Zoology, General
26.0702 Entomology
26.0703 Genetics, Human and Animal
26.0704 Pathology, Human and Animal
26.0705 Pharmacology, Human and Animal
26.0706 Physiology, Human and Animal
26.0799 Zoology, Other

26.99 ***Life Sciences, Other***
26.9999 Life Sciences, Other

Mathematics

27. Mathematics

27.01 ***Mathematics, General***
27.0101 Mathematics, General

27.02 ***Actuarial Sciences***
27.0201 Actuarial Sciences

27.03 ***Applied Mathematics***
27.0301 Applied Mathematics

27.04 ***Pure Mathematics***
27.0401 Pure Mathematics

27.05 ***Statistics***
27.0501 Statistics

27.99 ***Mathematics, Other***
27.9999 Mathematics, Other

Military Sciences

28. Military Sciences

28.01 ***Aerospace Science (Air Force)***
28.0101 Aerospace Science (Air Force)

28.02 ***Coast Guard Science***
28.0201 Coast Guard Science

28.03 ***Military Science (Army)***
28.0301 Military Science (Army)

28.04 ***Naval Science (Navy, Marines)***
28.0401 Naval Science (Navy, Marines)

28.99 ***Military Sciences, Other***
28.9999 Military Sciences, Other

29. Military Technologies

29.01 ***Military Technologies***
29.0101 Military Technologies
29.0199 Military Technologies, Other

Multi/Interdisciplinary Studies

30. Multi/Interdisciplinary Studies

30.01 ***Biological and Physical Sciences***
30.0101 Biological and Physical Sciences

30.02 ***Clinical Pastoral Care***
30.0201 Clinical Pastoral Care

30.03 ***Engineering and Other Disciplines***
30.0301 Engineering and Other Disciplines

30.04 ***Humanities and Social Sciences***
30.0401 Humanities and Social Sciences

30.05 ***Peace Studies***
30.0501 Peace Studies

30.06 ***Systems Science***
30.0601 Systems Science

30.07 ***Women's Studies***
30.0701 Women's Studies

30.99 ***Multi/Interdisciplinary Studies, Other***
30.9999 Multi/Interdisciplinary Studies, Other

Parks and Recreation

31. Parks and Recreation

31.01 ***Parks and Recreation, General***
31.0101 Parks and Recreation, General

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31.02 ***Outdoor Recreation***
31.0201 Outdoor Recreation

31.03 ***Parks and Recreation Management***
31.0301 Parks and Recreation Management

31.04 ***Water Resources***
31.0401 Water Resources

31.99 ***Parks and Recreation, Other***
31.9999 Parks and Recreation, Other

Personal and Social Development

32. Basic Skills

32.01 ***Basic Skills***
32.0101 Basic Skills, General
32.0102 Academic and Intellectual Skills
32.0103 Communication Skills
32.0104 Computational Skills
32.0105 Job-Seeking/Changing Skills
32.0106 Motor Skills
32.0199 Basic Skills, Other

Citizenship/Civic Activities

33. Citizenship/Civic Activities

33.01 ***Citizenship/Civic Activities***
33.0101 Citizenship/Civic Activities, General
33.0102 American Citizenship
33.0103 Civic Appreciation
33.0104 Civic Participation
33.0199 Citizenship/Civic Activities, Other

34. Health-Related Activities

34.01 ***Health-Related Activities***
34.0101 Health-Related Activities, General
34.0102 Birth-Related Health Practices
34.0103 Health Enhancement Practices
34.0104 Health Treatment/Prevention Practices
34.0199 Health-Related Activities, Other

35. Interpersonal Skills

35.01 ***Interpersonal Skills***
35.0101 Interpersonal Skills, General
35.0102 Building Human Relationships
35.0103 Perception of Others
35.0104 Social Role Engineering
35.0199 Interpersonal Skills, Other

36. Leisure and Recreational Activities

36.01 ***Leisure and Recreational Activities***
36.0101 Leisure and Recreational Activities, General
36.0102 Crafts (Leisure and Recreational)
36.0103 Games
36.0104 Hobbies
36.0105 Housing/Home Maintenance
36.0106 Nature Appreciation
36.0107 Pet Care
36.0108 Sports/Physical Education
36.0109 Travel
36.0199 Leisure and Recreational Activities, Other

37. Personal Awareness

37.01 ***Personal Awareness***
37.0101 Personal Awareness, General
37.0102 Coping Skills
37.0103 Personal Decisionmaking
37.0104 Self-Perception
37.0105 Values, Attitudes, and Beliefs
37.0199 Personal Awareness, Other

Philosophy, Religion, and Theology

38. Philosophy and Religion

38.01 ***Philosophy***
38.0101 Philosophy

38.02 ***Religion***
38.0201 Religion

38.99 ***Philosophy and Religion, Other***
38.9999 Philosophy and Religion, Other

39. Theology

39.01 ***Biblical Languages***
39.0101 Biblical Languages

39.02 ***Bible Studies***
39.0201 Bible Studies

39.03 ***Missionary Studies***
39.0301 Missionary Studies

39.04 ***Religious Education***
39.0401 Religious Education

39.05 ***Religious Music***
39.0501 Religious Music

39.06 ***Theological Studies***
39.0601 Theological Studies

39.99 ***Theology, Other***
39.9999 Theology, Other

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Physical Sciences

40. Physical Sciences

40.01 Physical Sciences, General
- 40.0101 Physical Sciences, General

40.02 Astronomy
- 40.0201 Astronomy

40.03 Astrophysics
- 40.0301 Astrophysics

40.04 Atmospheric Sciences and Meteorology
- 40.0401 Atmospheric Sciences and Meteorology

40.05 Chemistry
- 40.0501 Chemistry, General
- 40.0502 Analytical Chemistry
- 40.0503 Inorganic Chemistry
- 40.0504 Organic Chemistry
- 40.0505 Pharmaceutical Chemistry
- 40.0506 Physical Chemistry
- 40.0599 Chemistry, Other

40.06 Geological Sciences
- 40.0601 Geology
- 40.0602 Geochemistry
- 40.0603 Geophysics and Seismology
- 40.0604 Paleontology
- 40.0699 Geological Sciences, Other

40.07 Miscellaneous Physical Sciences
- 40.0701 Metallurgy
- 40.0702 Oceanography
- 40.0703 Earth Science
- 40.0799 Miscellaneous Physical Sciences, Other

40.08 Physics
- 40.0801 Physics, General
- 40.0802 Atomic/Molecular Physics
- 40.0803 Electron Physics
- 40.0804 Elementary Particle Physics
- 40.0805 Fluids and Plasmas
- 40.0806 Nuclear Physics
- 40.0807 Optics
- 40.0808 Solid State Physics
- 40.0899 Physics, Other

40.09 Planetary Science
- 40.0901 Planetary Science

40.99 Physical Sciences, Other
- 40.9999 Physical Sciences, Other

41. Science Technologies

41.01 Biological Technologies
- 41.0101 Biological Laboratory Technology
- 41.0102 Oceanographic (Biological) Technology
- 41.0199 Biological Technologies, Other

41.02 Nuclear Technologies
- 41.0201 Nuclear Materials Handling Technology
- 41.0202 Nuclear Power Plant Operation Technology
- 41.0203 Nuclear Power Plant Radiation Control Technology
- 41.0204 Radiologic (Physical) Technology
- 41.0299 Nuclear Technologies, Other

41.03 Physical Science Technologies
- 41.0301 Chemical Technology
- 41.0302 Geological Technology
- 41.0303 Metallurgical Technology
- 41.0304 Meteorological Technology
- 41.0305 Oceanographic (Physical) Technology
- 41.0399 Physical Science Technologies, Other

41.99 Science Technologies, Other
- 41.9999 Science Technologies, Other

Psychology

42. Psychology

42.01 Psychology, General
- 42.0101 Psychology, General

42.02 Clinical Psychology
- 42.0201 Clinical Psychology

42.03 Cognitive Psychology
- 42.0301 Cognitive Psychology

42.04 Community Psychology
- 42.0401 Community Psychology

42.05 Comparative Psychology
- 42.0501 Comparative Psychology

42.06 Counseling Psychology
- 42.0601 Counseling Psychology

42.07 Developmental Psychology
- 42.0701 Developmental Psychology

42.08 Experimental Psychology
- 42.0801 Experimental Psychology

42.09 Industrial and Organizational Psychology
- 42.0901 Industrial and Organizational Psychology

42.10 Personality Psychology
- 42.1001 Personality Psychology

42.11 Physiological Psychology
- 42.1101 Physiological Psychology

42.12 Psycholinguistics
- 42.1201 Psycholinguistics

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42.13 *Psychometrics*
42.1301 *Psychometrics*

42.14 *Psychopharmacology*
42.1401 *Psychopharmacology*

42.15 *Quantitative Psychology*
42.1501 *Quantitative Psychology*

42.16 *Social Psychology*
42.1601 *Social Psychology*

42.99 *Psychology, Other*
42.9999 *Psychology, Other*

Public Affairs and Protective Services

43. Protective Services

43.01 *Criminal Justice*
43.0101 *Correctional Administration*
43.0102 *Corrections*
43.0103 *Criminal Justice Administration*
43.0104 *Criminal Justice Studies*
43.0105 *Criminal Justice Technology*
43.0106 *Forensic Studies*
43.0107 *Law Enforcement*
43.0108 *Law Enforcement Administration*
43.0109 *Security Services*
43.0199 *Criminal Justice, Other*

43.02 *Fire Protection*
43.0201 *Fire Control and Safety Technology*
43.0202 *Fire Protection Administration*
43.0203 *Firefighting*
43.0299 *Fire Protection, Other*

43.99 *Protective Services, Other*
43.9999 *Protective Services, Other*

44. Public Affairs

44.01 *Public Affairs, General*
44.0101 *Public Affairs, General*

44.02 *Community Services*
44.0201 *Community Services*

44.03 *International Public Service*
44.0301 *International Public Service*

44.04 *Public Administration*
44.0401 *Public Administration*

44.05 *Public Policy Studies*
44.0501 *Public Policy Studies*

44.06 *Public Works*
44.0601 *Public Sanitation*
44.0602 *Public Transportation*
44.0603 *Public Utilities*
44.0699 *Public Works, Other*

44.07 *Social Work*
44.0701 *Social Work, General*
44.0702 *Medical Social Work*
44.0799 *Social Work, Other*

44.99 *Public Affairs, Other*
44.9999 *Public Affairs, Other*

Social Sciences

45. Social Sciences

45.01 *Social Sciences, General*
45.0101 *Social Sciences, General*

45.02 *Anthropology*
45.0201 *Anthropology*

45.03 *Archeology*
45.0301 *Archeology*

45.04 *Criminology*
45.0401 *Criminology*

45.05 *Demography*
45.0501 *Demography*

45.06 *Economics*
45.0601 *Economics*

45.07 *Geography*
45.0701 *Geography*

45.08 *History*
45.0801 *History*

45.09 *International Relations*
45.0901 *International Relations*

45.10 *Political Science and Government*
45.1001 *Political Science and Government*

45.11 *Sociology*
45.1101 *Sociology*

45.12 *Urban Studies*
45.1201 *Urban Studies*

45.99 *Social Sciences, Other*
45.9999 *Social Sciences, Other*

Trade and Industrial

46. Construction Trades

46.01 *Brickmasonry, Stonemasonry, and Tile Setting*
46.0101 *Brickmasonry, Stonemasonry, and Tile Setting, General*
46.0102 *Brick, Block, and Stonemasonry*
46.0103 *Tile Setting*
46.0199 *Brickmasonry, Stonemasonry, and Tile Setting, Other*

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46.02 *Carpentry*
- 46.0201 Carpentry

46.03 *Electrical and Power Transmission Installation*
- 46.0301 Electrical and Power Transmission Installation, General
- 46.0302 Electrician
- 46.0303 Lineworker
- 46.0399 Electrical and Power Transmission Installation, Other

46.04 *Miscellaneous Construction Trades*
- 46.0401 Building Maintenance
- 46.0402 Concrete Placing and Finishing
- 46.0403 Construction Inspection
- 46.0404 Drywall Installation
- 46.0405 Floor Covering Installation
- 46.0406 Glazing
- 46.0407 Insulation Installation
- 46.0408 Painting and Decorating
- 46.0409 Plastering
- 46.0410 Roofing
- 46.0411 Terrazzo Installation
- 46.0499 Miscellaneous Construction Trades, Other

46.05 *Plumbing, Pipefitting, and Steamfitting*
- 46.0501 Plumbing, Pipefitting, and Steamfitting, General
- 46.0502 Pipefitting and Steamfitting
- 46.0503 Plumbing
- 46.0599 Plumbing, Pipefitting, and Steamfitting, Other

46.99 *Construction Trades, Other*
- 46.9999 Construction Trades, Other

47. Mechanics and Repairers

47.01 *Electrical and Electronics Equipment Repair*
- 47.0101 Electrical and Electronics Equipment Repair, General
- 47.0102 Business Machine Repair
- 47.0103 Communication Electronics
- 47.0104 Computer Electronics
- 47.0105 Industrial Electronics
- 47.0106 Major Appliance Repair
- 47.0107 Motor Repair
- 47.0108 Small Appliance Repair
- 47.0109 Vending and Recreational Machine Repair
- 47.0199 Electrical and Electronics Equipment Repair, Other

47.02 *Heating, Air Conditioning, and Refrigeration Mechanics*
- 47.0201 Heating, Air Conditioning, and Refrigeration Mechanics, General
- 47.0202 Cooling and Refrigeration
- 47.0203 Heating and Air Conditioning
- 47.0299 Heating, Air Conditioning, and Refrigeration Mechanics, Other

47.03 *Industrial Equipment Maintenance and Repair*
- 47.0301 Industrial Equipment Maintenance and Repair, General
- 47.0302 Heavy Equipment Maintenance and Repair
- 47.0303 Industrial Machinery Maintenance and Repair
- 47.0304 Mine Equipment Maintenance and Repair
- 47.0305 Oil and Gas Drilling Equipment Operation and Maintenance
- 47.0399 Industrial Equipment Maintenance and Repair, Other

47.04 *Miscellaneous Mechanics and Repairers*
- 47.0401 Electromechanical, Hydraulic, and Pneumatic Instrument Repair
- 47.0402 Gunsmithing
- 47.0403 Locksmithing and Safe Repair
- 47.0404 Musical Instrument Repair
- 47.0405 Operation, Maintenance, and Repair of Audio-Visual Equipment
- 47.0406 Shoe and Boot Repair
- 47.0407 Sporting Goods Equipment Repair
- 47.0408 Watch Repair
- 47.0499 Miscellaneous Mechanics and Repairers, Other

47.05 *Stationary Energy Sources*
- 47.0501 Stationary Energy Sources, General
- 47.0502 Conventional Electric Power Generation
- 47.0503 Industrial Nuclear Energy
- 47.0504 Pumping Plants
- 47.0599 Stationary Energy Sources, Other

47.06 *Vehicle and Mobile Equipment Mechanics and Repairers*
- 47.0601 Vehicle and Mobile Equipment Mechanics and Repairers, General
- 47.0602 Aircraft Mechanics
- 47.0603 Automotive Body Repair
- 47.0604 Automotive Mechanics
- 47.0605 Diesel Engine Mechanics
- 47.0606 Small Engine Repair
- 47.0699 Vehicle and Mobile Equipment Mechanics and Repairers, Other

47.99 *Mechanics and Repairers, Other*
- 47.9999 Mechanics and Repairers, Other

48. Precision Production

48.01 *Drafting*
- 48.0101 Drafting, General
- 48.0102 Architectural Drafting
- 48.0103 Civil/Structural Drafting
- 48.0104 Electrical/Electronics Drafting
- 48.0105 Mechanical Drafting
- 48.0199 Drafting, Other

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48.02 *Graphic and Printing Communications*
- 48.0201 Graphic and Printing Communications, General
- 48.0202 Bookbinding
- 48.0203 Commercial Art
- 48.0204 Commercial Photography
- 48.0205 Composition, Make-up, and Typesetting
- 48.0206 Lithography, Photography, and Plate-making
- 48.0207 Photographic Laboratory and Darkroom
- 48.0208 Printing Press Operations
- 48.0209 Silk Screen Making and Printing
- 48.0299 Graphic and Printing Communications, Other

48.03 *Leatherworking and Upholstering*
- 48.0301 Leatherworking and Upholstering, General
- 48.0302 Saddlemaking and Repair
- 48.0303 Upholstering
- 48.0399 Leatherworking and Upholstering, Other

48.04 *Precision Food Production*
- 48.0401 Precision Food Production, General
- 48.0402 Meatcutting
- 48.0403 Slaughtering and Butchering
- 48.0499 Precision Food Production, Other

48.05 *Precision Metal Work*
- 48.0501 Precision Metal Work, General
- 48.0502 Foundry Work
- 48.0503 Machine Tool Operation/Machine Shop
- 48.0504 Metal Fabrication
- 48.0505 Metal Patternmaking
- 48.0506 Sheet Metal
- 48.0507 Tool and Die Making
- 48.0508 Welding, Brazing, and Soldering
- 48.0599 Precision Metal Work, Other

48.06 *Precision Work, Assorted Materials*
- 48.0601 Industrial Ceramics Manufacturing
- 48.0602 Jewelry Design, Fabrication, and Repair
- 48.0603 Optical Goods Work
- 48.0604 Plastics
- 48.0699 Precision Work, Assorted Materials, Other

48.07 *Woodworking*
- 48.0701 Woodworking, General
- 48.0702 Furniture Making
- 48.0703 Millwork and Cabinet Making
- 48.0799 Woodworking, Other

48.99 *Precision Production, Other*
- 48.9999 Precision Production, Other

49. Transportation and Material Moving

49.01 *Air Transportation*
- 49.0101 Air Transportation, General
- 49.0102 Airplane Piloting and Navigation
- 49.0103 Aviation Computer Technology
- 49.0104 Aviation Management
- 49.0105 Air Traffic Control
- 49.0106 Flight Attendants
- 49.0199 Air Transportation, Other

49.02 *Vehicle and Equipment Operation*
- 49.0201 Vehicle and Equipment Operation, General
- 49.0202 Construction Equipment Operation
- 49.0203 Material Handling
- 49.0204 Mining Equipment Operation
- 49.0205 Truck and Bus Driving
- 49.0299 Vehicle and Equipment Operation, Other

49.03 *Water Transporation*
- 49.0301 Water Transportation, General
- 49.0302 Barge and Boat Operation
- 49.0303 Commercial Fishing Operation
- 49.0304 Deep Water Diving and Life Support Systems
- 49.0305 Marina Operations
- 49.0306 Marine Maintenance
- 49.0307 Merchant Marine Officers
- 49.0308 Sailors and Deckhands
- 49.0399 Water Transportation, Other

49.99 *Transportation and Material Moving, Other*
- 49.9999 Transportation and Material Moving, Other

Visual and Performing Arts

50. Visual and Performing Arts

50.01 *Visual and Performing Arts, General*
- 50.0101 Visual and Performing Arts, General

50.02 *Crafts*
- 50.0201 Crafts, General
- 50.0202 Ceramics
- 50.0203 Enameling
- 50.0204 Fiber/Textiles/Weaving
- 50.0205 Glass
- 50.0206 Metal/Jewelry
- 50.0299 Crafts, Other

50.03 *Dance*
- 50.0301 Dance

50.04 *Design*
- 50.0401 Design, General
- ------- Environmental Design (see 04.0401)
- ------- Fashion Design (see 19.0902)
- 50.0402 Graphic Design
- 50.0403 Illustration Design
- 50.0404 Industrial Design
- ------- Interior Design (see 04.0501)
- ------- Medical Illustrating (see 17.0504)
- 50.0405 Theatre Design
- 50.0499 Design, Other

50.05 *Dramatic Arts*
- 50.0501 Dramatic Arts

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50.06 Film Arts

50.0601	Film Arts, General
50.0602	Cinematography/Film
50.0603	Film Animation
50.0604	Holography
50.0605	Photography
50.0606	Video
50.0699	Film Arts, Other

50.07 Fine Arts

50.0701	Fine Arts, General
50.0702	Art Conservation
-------	Art Education (see 13.1302)
50.0703	Art History and Appreciation
-------	Art Therapy (see 17.0801)
50.0704	Arts Management
50.0705	Drawing
50.0706	Intermedia
50.0707	Kinetics
50.0708	Painting
50.0709	Sculpture
50.0799	Fine Arts, Other

50.08 Graphic Arts Technology

50.0801	Graphic Arts Technology

50.09 Music

50.0901	Music, General
50.0902	Music History and Appreciation
50.0903	Music Performance
50.0904	Music Theory and Composition
50.0999	Music, Other

50.99 Visual and Performing Arts, Other

50.9999	Visual and Performing Arts, Other

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Chapter III

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Definitions of Instructional Programs

Program Purpose Dimension

Award Programs. Programs of instruction requiring a specified amount of educational work and resulting in a diploma, certificate, or degree conferred by the faculty and ratified by the governing board of the school or agency granting the award.

1.0 Elementary/Secondary Programs

1.1 ***Elementary School Program.*** A program of instruction usually requiring eight years of elementary school work, the completion of which results in an elementary school diploma or equivalent recognition conferred by the faculty and ratified by the governing board of the school or agency granting the diploma.

1.2 ***Junior High School Program.*** A program of instruction usually requiring three years of junior high school work, the completion of which results in a junior high school diploma or equivalent recognition conferred by the faculty and ratified by the governing board of the school or agency granting the diploma.

1.3 ***High School Diploma Program.*** A program of instruction usually requiring three or four years of high school work, the completion of which results in a high school diploma conferred by the faculty and ratified by the governing board of the school or agency granting the diploma.

2.0 Postsecondary Certificates/Diplomas/Degrees

2.1 ***Postsecondary Certificate or Diploma (less than one year).*** A program of instruction requiring less than one year of college level work, the completion of which results in a postsecondary certificate or diploma conferred by the faculty and ratified by the governing board of the institution granting the certificate or diploma.

2.2 ***Postsecondary Certificate or Diploma (one year or more but less than four years).*** A program of instruction requiring one year or more of full-time equivalent postsecondary level work, the completion of which results in a postsecondary certificate or diploma conferred by the faculty and ratified by the governing board of the institution granting the certificate or diploma.

2.3 ***Associate Degree.*** A program of instruction requiring at least two but less than four years of full-time equivalent college level work, the completion of which results in an associate degree conferred by the faculty and ratified by the governing board of the institution granting the degree.

2.4 ***Baccalaureate Degree.*** A program of instruction requiring at least four but not more than five years of full-time equivalent college academic work, the completion of which results in a baccalaureate degree conferred by the faculty and ratified by the governing board of the institution granting the degree.

3.0 First-Professional Certificates/Degrees

3.1 ***First-Professional Degree.*** A program of instruction the completion of which results in a first-professional degree conferred by the faculty and ratified by the governing board of the institution granting the degree. In addition, the first-professional degree (1) signifies completion of the academic requirements to begin practice in the profession; (2) requires at least two years of full-time equivalent college level work prior to entrance; and (3) usually requires a total of at least six years of full-time equivalent academic work to complete the degree program, including prior required college level work plus the length of the professional program itself.

3.2 ***Post-Professional Certificate.*** A program of instruction requiring significant achievement beyond the first-professional degree, the completion of which results in a formal post-professional certificate conferred by the faculty and ratified by the governing board of the institution granting the certificate.

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4.0 Graduate Certificates/Degrees

4.1 ***Graduate Certificate.*** A program of instruction requiring significant achievement beyond the baccalaureate degree, the completion of which results in a formal graduate certificate conferred by the faculty and ratified by the governing board of the institution granting the certificate.

4.2 ***Master's Degree.*** A program of instruction requiring at least one but not more than two years of full-time equivalent academic work beyond the baccalaureate degree, the completion of which results in a master's degree conferred by the faculty and ratified by the governing board of the institution granting the degree.

4.3 ***Intermediate Graduate Degree.*** A program of instruction requiring at least two but not more than three years of full-time equivalent academic work beyond the baccalaureate degree, the completion of which results in an intermediate graduate degree conferred by the faculty and ratified by the governing board of the institution granting the degree.

4.4 ***Doctoral Degree.*** A program of instruction requiring at least three years of full-time equivalent academic work beyond the baccalaureate degree, the completion of which results in a doctoral degree conferred by the faculty and ratified by the governing board of the institution granting the degree.

4.5 ***Post-Doctoral Award.*** A program of instruction requiring significant achievement beyond the doctoral degree, the completion of which results in a formal post-doctoral award conferred by the faculty and ratified by the governing board of the institution granting the degree.

Nonformal Award Programs

5.0 Nonformal Award Programs. Programs of instruction intended to serve learning clienteles and learning objectives that do not result in formal recognition such as a diploma, certificate, or degree.

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Program Category Dimension

01. **Agribusiness and Agricultural Production.** A summary of groups of instructional programs that prepare individuals to apply scientific knowledge and methods, and technical skills in support of agribusiness and agricultural activities concerned with the production and propagation of crops and animals, supplies and services, mechanics, products processing and marketing, and horticulture.

01.01 ***Agricultural Business and Management.*** A group of instructional programs that prepare individuals to apply the economic and business principles involved in the organization, operation, and management of farm and agricultural business.

01.0101 *Agricultural Business and Management, General.* An instructional program that generally prepares individuals to apply the economic and business principles involved in the organization, operation, and management of farm and agricultural businesses.

01.0102 *Agricultural Business.* An instructional program that prepares individuals to apply business and economic principles relating to the purchasing, selling, producing, and marketing of agricultural products and services for maximizing profit.

01.0103 *Agricultural Economics.* An instructional program that prepares individuals to apply business and economic principles relating to the allocation of resources to the production and marketing of agricultural products and services in the domestic and international markets.

01.0104 *Farm and Ranch Management.* An instructional program that prepares individuals to manage a farm or ranch. Includes instruction in farm enterprise analysis, accounting, taxes, production, financing, capital resources, purchasing, government programs, farm inputs, performance records, contracts, estate planning, and marketing.

01.0199 *Agricultural Business and Management, Other.* Any instructional program in agricultural business and management not described above.

01.02 ***Agricultural Mechanics.*** A group of instructional programs that prepare individuals to select, operate, maintain, service, sell, and use agriculture/agribusiness power units, machinery, equipment, structures, and utilities. Includes instruction in agricultural power units; the planning and selection of materials for the construction of agricultural facilities; and the mechanical practices associated with irrigation, drainage, run-off, water conservation, and erosion control.

01.0201 *Agricultural Mechanics, General.* An instructional program that prepares individuals in a general way to select, operate, maintain, service, sell and use agriculture/agribusiness power units, machinery, equipment, structures, and utilities. Includes instruction in agricultural power units; the planning and selection of materials for the construction of agricultural facilities; and the mechanical practices associated with irrigation, drainage, run-off, water conservation, and erosion control.

01.0202 *Agricultural Electrification, Power, and Controls.* An instructional program that prepares individuals for the safe use of electricity, electrical power, equipment, and automatic controls.

01.0203 *Agricultural Mechanics, Construction, and Maintenance Skills.* An instructional program that prepares individuals to select, safely use, and maintain hand and power tools, arc and acetylene welding equipment, and construction materials.

01.0204 *Agricultural Power Machinery.* An instructional program that prepares individuals to select, operate, service, maintain, and repair a variety of agricultural power units and agricultural machinery and equipment. Includes instruction in gas, diesel, and electric units; welding; refrigeration; and hydraulics and other power systems.

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01.0205 *Agricultural Structures, Equipment, and Facilities.* An instructional program that prepares individuals to plan, select materials for, construct, utilize, and maintain agricultural structures, equipment, and environmental facilities such as barns, sheds, milking parlors, manure and other waste handling structures and equipment, forage and grain storage structures, and greenhouses.

01.0206 *Soil and Water Machanical Practices.* An instructional program that prepares individuals to implement soil and water management by surveying, planning, laying out, constructing, using, and maintaining irrigation, drainage, and run-off systems.

01.0299 *Agricultural Mechanics, Other.* Any instructional program in agricultural mechanics not described above.

01.03 ***Agricultural Production.*** A group of instructional programs that prepare individuals in planning and economically using facilities, land, water, machinery, chemicals, finance, and labor in the production of plant and animal products.

01.0301 *Agricultural Production, General.* An instructional program that generally prepares individuals in planning and economically using facilities, land, water, machinery, chemicals, finance, and labor in the production of plant and animal products.

01.0302 *Animal Production.* An instructional program that prepares individuals to operate animal production enterprises by developing competencies concerning the selection, breeding, physiology, nutrition, health, housing, feeding, and marketing of animals such as dairy cattle, beef cattle, horses, swine, sheep, poultry, bees, rabbits, cats, dogs, and earthworms.

01.0303 *Aquaculture.* An instructional program that prepares individuals for fish farming and marine plant production and harvesting. Includes instruction in feeding, culturing, protecting, and propagating commercially produced marine food products and seaweed, and the uses of marine foods.

01.0304 *Crop Production.* An instructional program that prepares individuals to operate enterprises concerned with the production of cereal grain, fiber, forage, oilseed, tree fruits and nuts, small fruits, vegetables, and other crops. Includes instruction in soils, plant nutrition, plant and seed identification, genetics, physiology, entomology, plant pathology, plant disease, and pest control, including insecticides, fungicides, herbicides, nonchemical controls, and plant genetic resistance.

01.0305 *Game Farm Management.* An instructional program that prepares individuals to breed, raise, and protect game animals and wildlife for conservation and stocking purposes. Includes instruction in conservation practices and may involve a study of managerial competencies unique to game farm operation.

01.0399 *Agricultural Production, Other.* Any instructional program in agricultural production not described above.

01.04 ***Agricultural Products and Processing.*** A group of instructional programs that prepare individuals to process food and nonfood products and to inspect those products preparatory to marketing. Includes instruction in the characteristics and properties of agricultural products and of agriculture-related processing techniques and skills (including quality control and mechanical operations involved in marking, grading, inspecting, packaging, storing, and marketing).

01.0401 *Agricultural Products and Processing, General.* An instructional program that generally prepares individuals to process food and nonfood products and to inspect those products preparatory to marketing. Includes instruction in the characteristics and properties of agricultural products and of agriculture-related processing techniques and skills (including quality control and mechanical operations involved in marking, grading, inspecting, packaging, storing, and marketing).

01.0402 *Food Products.* An instructional program that prepares individuals for activities dealing with processing food products such as meat, fish, poultry, eggs, dairy products, fruits and vegetables, and cereal grains for sale and consumption.

01.0403 *Nonfood Products.* An instructional program that prepares individuals for activities involved with processing nonfood products, such as cotton, tobacco, and wool.

01.0499 *Agricultural Products and Processing, Other.* Any instructional program in agricultural products and processing not described above.

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01.05 ***Agricultural Services and Supplies.*** A group of instructional programs that prepare individuals to sell supplies for agricultural production; provide agricultural services; and purchase, grade, store, market, and transport agricultural products. Includes instruction in animal breeding, horseshoeing, small animal services, and animal hospital care services.

01.0501 *Agricultural Services and Supplies, General.* An instructional program that generally prepares individuals to sell supplies for agricultural production; provide agricultural services; and purchase, grade, store, market, and transport agricultural products. Includes instruction in animal breeding, horseshoeing, small animal services, and animal hospital care services.

01.0502 *Agricultural Services.* An instructional program that prepares individuals to provide agricultural services such as custom work, equipment operation and maintenance, management and finance. Includes instruction in small animal services including breeding, horseshoeing, pet services, and animal hospital services.

01.0503 *Agricultural Supplies Marketing.* An instructional program that prepares individuals for purchasing, storing, grading, transporting, and marketing agricultural supplies such as feeds, seeds, fertilizers, chemicals, machinery and parts, and products such as livestock and grains.

01.0504 *Animal Grooming.* An instructional program that prepares individuals to groom pets such as dogs and cats by clipping the nails, cleaning the ears, brushing the hair, bathing and drying the animal, styling the hair through the use of hair clippers and scissors and beautifying through the use of items such as bows.

01.0505 *Animal Training.* An instructional program that prepares individuals to teach animals to obey commands, compete in shows, or perform tricks to entertain an audience.

01.0506 *Horseshoeing.* An instructional program that prepares individuals to select aluminum and steel shoes (plates) and fit, shape, and nail shoes to animals' hooves.

01.0599 *Agricultural Services and Supplies, Other.* Any instructional program in agricultural services and supplies not described above.

01.06 ***Horticulture.*** A group of instructional programs that prepare individuals to produce, process, and market plants, shrubs, and trees used principally for ornamental, recreational, and aesthetic purposes and to establish, maintain, and manage horticultural enterprises such as arboriculture, floriculture, greenhouse operation and management, landscaping, nursery operation and management, and turf management. Includes instruction in machinery and equipment necessary for each horticultural enterprise.

01.0601 *Horticulture, General.* An instructional program that generally prepares individuals to produce, process, and market plants, shurbs, and trees used principally for ornamental, recreational, and aesthetic purposes and to establish, maintain, and manage horticultural enterprises such as arboriculture, floriculture, greenhouse operation and management, landscaping, nursery operation and management, and turf management. Includes instruction in machinery and equipment necessary for each horticultural enterprise.

01.0602 *Arboriculture.* An instructional program that prepares individuals to cultivate and maintain woody plants and trees used for decoration and shade purposes.

01.0603 *Floriculture.* An instructional program that prepares individuals to produce flowers, foliage, and related plant materials in fields and greenhouses for ornamental purposes, and to arrange, package, and market these materials.

01.0604 *Greenhouse Operation and Management.* An instructional program that prepares individuals to produce plants under glass and in other artificial environments.

01.0605 *Landscaping.* An instructional program that prepares individuals to locate, plant, and maintain turf, plants, shrubs, or devices for the beautification of home grounds and other areas of human habitation and recreation.

01.0606 *Nursery Operation and Management.* An instructional program that prepares individuals to produce turf, plants, shrubs, and/or trees for the purpose of transplanting or propagating them.

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01.0607 *Turf Management.* An instructional program that prepares individuals to establish, manage, and maintain grassed areas for oramental and/or recreational purposes.

01.0699 *Horticulture, Other.* Any instructional program in horticulture not described above.

01.07 ***International Agriculture.*** A group of instructional programs (see 01.0701).

01.0701 *International Agriculture.* An instructional program that prepares individuals to apply the social, biological, and agricultural sciences and technologies as they relate to food production and distribution on a world-wide scale.

01.99 ***Agribusiness and Agricultural Production, Other.*** A group of instructional programs in agribusiness and agricultural production not described above.

01.9999 *Agribusiness and Agricultural Production, Other.* Any instructional program in agribusiness and agricultural production not described above.

02. **Agricultural Sciences.** A summary of groups of instructional programs that describe the production, processing, and distribution of food and fiber.

02.01 ***Agricultural Sciences, General.*** A group of instructional programs (see 02.0101).

02.0101 *Agricultural Sciences, General.* An instructional program that generally describes the production, processing, and distribution of food and fiber.

02.02 ***Animal Sciences.*** A group of instructional programs that describe the theories, principles, and applications of appropriate technical skills that apply to the production and management of animals and animal products.

02.0201 *Animal Sciences, General.* An instructional program that generally describes the theories, principles, and applications of appropriate technical skills that apply to the production and management of animals and animal products.

02.0202 *Animal Breeding and Genetics.* An instructional program that describes the principles of inheritance and their applications for the improvement of agricultural animals through breeding and selection.

02.0203 *Animal Health.* An instructional program that describes the environment, drugs, antibiotics, vaccinations, blood tests, and other management factors that effect the prevention and control of diseases in agricultural animals.

02.0204 *Animal Nutrition.* An instructional program that describes the relationship in agricultural animals of proteins, fats, carbohydrates, water, minerals, vitamins, and feed additives in the production of meat, milk, eggs, and wool.

02.0205 *Animal Physiology.* An instructional program that describes the body processes and functions that relate to agricultural animal production, such as lactation, reproduction (including artificial insemination and heat detection), egg production, digestion, growth, and wool production.

02.0206 *Dairy.* An instructional program that describes the theories, principles, and applications of appropriate technical skills that apply to the production and management of milk animals and dairy products.

02.0207 *Fisheries Science.* An instructional program that describes the life processes of waterlife, including age and rate of growth, populations habitats, reproduction, and mortality.

02.0208 *Livestock.* An instructional program that describes the theories, principles, and applications of appropriate technical skills that apply to the production and management of livestock and livestock products.

02.0209 *Poultry.* An instructional program that describes the theories, principles, and applications of appropriate technical skills that apply to the production and management of poultry and poultry products.

02.0299 *Animal Sciences, Other.* Any instructional program in animal sciences not described above.

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02.03 ***Food Sciences.*** A group of instructional programs that describe the principles and practices involved in converting agricultural products to forms suitable for direct human consumption, or for storage.

02.0301 *Food Sciences, General.* An instructional program that generally describes the principles and practices involved in converting agriculture products to forms suitable for direct human consumption or for storage.

02.0302 *Dairy Processing.* An instructional program that describes the principles, sciences, and practices involved with the conversion of raw milk to dairy foods including milk, cheese, and dehydrated and frozen products.

02.0303 *Food Distribution.* An instructional program that describes the principles and practices used in the marketing, sales, merchandising, and distribution of foods from manufacturers or processors to the consumer.

02.0304 *Food Engineering.* An instructional program that describes the principles and theories used in the development of equipment and facilities utilized in the processing, preservation, and handling of food products.

02.0305 *Food Packaging.* An instructional program that describes the principles and techniques used to develop and implement methods of preparing and packaging food products to preserve, protect, and display them.

02.0306 *Food Technology.* An instructional program that prepares individuals to convert plant and animal products to consumable foods and to preserve foods.

02.0399 *Food Sciences, Other.* Any instructional program in food sciences not described above.

02.04 ***Plant Sciences.*** A group of instructional programs that describe the theories and principles of science and practices involved in the production and management of plants for food, feed, fiber, and soil conservation.

02.0401 *Plant Sciences, General.* An instructional program that generally describes the theories and principles of science and practices involved in the production and management of plants for food, feed, fiber, and soil conservation.

02.0402 *Agronomy.* An instructional program that describes the principles and practices involved in the development, production, and management of field crops, including plant breeding, plant diseases, soils, insect control, and weed control.

02.0403 *Horticulture Science.* An instructional program that describes the principles and practices involved in the production of fruits and vegetables and the management of the pests of these crops.

02.0404 *Ornamental Horticulture.* An instructional program that describes the principles, practices, and skills applied in the production and use of decorative plants and plant material and associated business enterprises.

02.0405 *Plant Breeding and Genetics.* An instructional program that describes the theories and principles of inheritance, botany, statistics, and biometry through hybridization and differential selection for plant improvement.

02.0406 *Plant Pathology (Applied).* An instructional program that describes the principles and fundamental sciences associated with recognizing diseased plants, identifying causal agents, and preventing or reducing economic loss.

02.0407 *Plant Physiology.* An instructional program that describes the principles and fundamental sciences involved in the life processes of plants and plant responses to the elements of the physical environment.

02.0408 *Plant Protection (Pest Management).* An instructional program that describes the principles and practices of combining entomology, plant pathology, and weed science with crop production to minimize the economic loss caused by plant pests and to protect the environment.

02.0409 *Range Management.* An instructional program that describes the principles and practices involved in determining and applying appropriate uses of range resources to ensure sustained productivity and resource conservation.

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02.0410 *Turf Management Science.* An instructional program that describes the principles and practices involved in the production and management of grasses and other ground covers for recreational facilities, lawns, roadsides, and similar uses.

02.0499 *Plant Sciences, Other.* Any instructional program in plant sciences not described above.

02.05 ***Soil Sciences.*** A group of instructional programs that describe the physical, chemical, and biological sciences and basic principles which relate to the determination of soil properties and their conservation and management for crop production or other purposes.

02.0501 *Soil Sciences, General.* An instructional program that generally describes the physical, chemical, and biological sciences and basic principles which relate to the determination of soil properties and their conservation and management for crop production, or other purposes.

02.0502 *Soil Chemistry.* An instructional program that describes fundamental chemical principles as they relate to the nature and properties of soils and the development of basic soil and crop management theories.

02.0503 *Soil Conservation.* An instructional program that describes the principles and practices used in managing soil and land resources ro optimize productivity and minimize resource loss.

02.0504 *Soil Management and Fertility.* An instructional program that describes the chemical, physical, and biological principles utilized in maintaining and improving the capacity of soils to sustain high crop yields and minimize resource losses.

02.0505 *Soil Microbiology.* A instructional program that describes fundamental microbiological principles as they relate to the nature and properties of soils, and interaction of soil plants with physical and chemical components as they relate to soil and crop management theories.

02.0506 *Soil Physics.* An instructional program that describes the fundamental physical science principles as they relate to the nature and properties of soils, and the development of basic soil/crop management theories.

02.0599 *Soil Sciences, Other.* Any instructional program in soil sciences not described above.

02.99 ***Agricultural Sciences, Other.*** A group of instructional programs in agricultural sciences not described above.

02.9999 *Agricultural Sciences, Other.* Any instructional program in agricultural sciences not described above.

03. **Renewable Natural Resources.** A summary of groups of instructional programs that prepare individuals for activities involving the conservation and/or improvement of natural resources such as air, soil, water, land, fish, and wildlife for economic and recreational purposes.

03.01 ***Renewable Natural Resources, General.*** A group of instructional programs (see 03.0101).

03.0101 *Renewable Natural Resources, General.* An instructional program that generally prepares individuals for activities involving the conservation and/or improvement of natural resources such as air, soil, water, land, fish, and wildlife for economic and recreational purposes.

03.02 ***Conservation and Regulation.*** A group of instructional programs that prepare individuals to engage in activities concerned with the preservation, protection, and regulation of renewable natural resources.

03.0201 *Conservation and Regulation, General.* An instructional program that generally prepares individuals to engage in activities concerned with maintaining the stability and productivity of air, soil, water, land, fish, and wildlife.

03.0202 *Conservation.* An instructional program that prepares individuals to engage in activities concerned with maintaining the stability and productivity of air, soil, water, land, fish, and wildlife.

03.0203 *Resources Protection and Regulation.* An instructional program that prepares individuals to enforce regulations and laws pertaining to the protection and economic use of renewable natural resources.

03.0299 *Conservation and Regulation, Other.* Any instructional program in conservation and regulation not described above.

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03.03 ***Fishing and Fisheries.*** A group of instructional programs that prepare individuals to engage in fishing for commercial purposes and to manage fish resources to optimize production.

03.0301 *Fishing and Fisheries, General.* An instructional program that generally prepares individuals to engage in fishing for commercial purposes and to manage fish resources to optimize production.

- - - - - - - *Commercial Fishing Operation.* (see 49.0303).

03.0302 *Fisheries.* An instructional program that prepares individuals to apply the physical and biological principles and practices which promote the understanding and managment of fish resources to optimize production in fresh and salt waters.

03.0399 *Fishing and Fisheries, Other.* Any instructional program in fishing and fisheries not described above.

03.04 ***Forestry Production and Processing.*** A group of instructional programs that prepare individuals to produce, protect, and manage timber and specialty forest crops; maintain, operate, and repair related equipment and machinery; harvest and transport trees as a crop and select, grade, and market forest raw materials for converting into a variety of consumer goods, and to utilize the forest for multiple purposes such as game preserves and recreation.

03.0401 *Forestry Production and Processing, General.* An instructional program that prepares individuals in a general way to produce, protect, and manage timber and specialty forest crops; maintain, operate, and repair related equipment and machinery; harvest and transport trees as a crop and select, grade, and market forest raw materals for converting into a variety of consumer goods, and to utilize the forest for multiple purposes such as game preserves and recreation.

03.0402 *Forest Production.* An instructional program that prepares individuals to plant, select, identify, manage, and protect timber and specialty forest crops such as Christmas trees. Includes instruction in maintenance, safe operation, and repair of related equipment.

03.0403 *Forest Products Utilization.* An instructional program that prepares individuals to select, grade, and market forest raw materials for conversion to consumer goods such as paper, plywood, wallboard, turpentine, plastics, and preservation-treated wood products. Includes instruction in maintenance, safe operation, and repair of related equipment.

03.0404 *Forest Products Processing Technology.* An instructional program that prepares individuals to assist a manager, engineer, chemist, or forest product scientist in the measurement, analysis of quality, testing, and processing of harvested forest raw materials. Includes instruction in identifying types of raw forest materials; procedures and processes involved, including measuring, assessing quality, evaluating commercial value, and testing strength of fiber or cut products; cutting into finished or semi-finished products; drying or otherwise conditioning; finishing or laminating into plywood marketable products; and cutting, digesting, and fabricating into paperboard or other product form.

03.0405 *Logging.* An instructional program that prepares individuals to harvest and transport trees as a crop, and maintain, safely operate, and repair logging equipment and machinery.

03.0406 *Pulp and Paper Production.* An instructional program that prepares individuals in manufacturing techniques to convert logs into cellulose and wood pulp into newsprint, kraft, and other paper grades.

03.0499 *Forestry Production and Processing, Other.* Any instructional program in forestry production and processing not described above.

03.05 ***Forestry and Related Sciences.*** A group of instructional program that prepare individuals to apply the science, art, and practice of managing and using for human benefit the natural resources that occur on, and in association with, forest lands.

03.0501 *Forestry and Related Sciences, General.* An instructional program that generally prepares individuals to apply the science, art, and practice of managing and using for human benefit the natural resources that occur on, and in association with, forest lands.

03.0502 *Forestry Science.* An instructional program that prepares individuals to manage and use for human benefit the natural resources that occur on, and in association with, forest lands.

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03.0503 *Forest Biology.* An instructional program that prepares individuals in biological and ecological processes and systems, including physiology, forest genetics, and forest soils.

03.0504 *Forest Engineering.* An instructional program that prepares individuals in forest road design and construction, harvesting plans and systems, machinery design and other engineering needs.

03.0505 *Forest Hydrology.* An instructional program that prepares individuals in the principles and processes of the movement and disposition of water on forest and land, including watershed management.

03.0506 *Forest Management.* An instructional program that prepares individuals in the management and administration of forests and forest lands. Includes instruction in silviculture, forest protection, and forest policy, planning and economics.

03.0507 *Forest Mensuration.* An instructional program that prepares individuals to determine the dimensions, form, increment and age of trees individually, or collectively. Includes instruction in remote sensing, forest modeling, and forest biometrics.

03.0508 *Urban Forestry.* An instructional program that prepares individuals in the planning, care, and maintenance of individual trees, or forested areas in or close to areas of dense habitation where special practices may be needed.

03.0509 *Wood Science.* An instructional program that prepare individuals for occupations dealing with wood, wood anatomy and properties, wood engineering, wood utilization, and the provision of useful products. Includes instruction in production and marketing.

03.0599 *Forestry and Related Sciences, Other.* Any instructional program in forestry and related sciences not described above.

03.06 ***Wildlife Management.*** A group of instructional programs (see 03.0601).

03.0601 *Wildlife Management.* An instructional program that prepares individuals in the principles and practices used in the production and improvement of wildlife resources for aesthetic, ecological, and recreational uses of public and private lands.

03.99 ***Renewable Natural Resources, Other.*** A group of instructional programs in renewable natural resources not described above.

03.9999 *Renewable Natural Resources, Other.* An instructional program in renewable natural resources not described above.

04. Architecture and Environmental Design. A summary of groups of instructional programs that describe the methods to create, adapt, alter, preserve, and control man's physical and social surroundings.

04.01 ***Architecture and Environmental Design, General.*** A group of instructional programs (see 04.0101).

04.0101 *Architecture and Environmental Design, General.* An instructional program that generally describes the methods to create, adapt, alter, preserve, and control man's physical and social surroundings.

04.02 ***Architecture.*** A group of instructional programs (see 04.0201).

04.0201 *Architecture.* An instructional program that describes the processes that promote the use of aesthetic patterns, forms, and structures for human purposes in harmony with the environment.

04.03 ***City, Community, and Regional Planning.*** A group of instructional programs (see 04.0301).

04.0301 *City, Community, and Regional Planning.* An instructional program that describes the application of the planning process to the development of environmental programs designed to deal with urban, regional, and other geographically distinct areas.

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04.04 ***Environmental Design.*** A group of instructional programs (see 04.0401).

04.0401 *Environmental Design.* An instructional program that describes the processes, procedures, observations, and techniques essential to the development of designs for interior and exterior environments.

04.05 ***Interior Design.*** A group of instructional programs (see 04.0501).

04.0501 *Interior Design.* An instructional program that describes the processes, procedures, observations, and techniques essential to the development of designs for interior environments.

04.06 ***Landscape Architecture.*** A group of instructional programs (see 04.0601).

04.0601 *Landscape Architecture.* An instructional program that describes the design processes as applied to man-made structures and objects and animate and inanimate natural materials in the landscape with the object of furthering human purposes, and synthesizing knowledge of functional relationships, human behavior, ecology, and land form, construction technology, and aesthetic sensitivity.

04.07 ***Urban Design.*** A group of instructional programs (see 04.0701).

04.0701 *Urban Design.* An instructional program that describes the systematic process of creating and modifying those physical elements wihch constitute a city; synthesizing function, aesthetic sensitivity, technology, and social, phychological, and economic well-being.

04.99 ***Architecture and Environmental Design, Other.*** A group of instructional programs in architecture and environmental design not described above.

04.9999 *Architecture and Environmental Design, Other.* Any instructional program in architecture and environmental design not described above.

05. Area and Ethnic Studies. A summary of groups of instructional programs that describe the history, society, politics, culture, and economics of either a particular geographic region or a particular subset of the population sharing common racial characteristics or common traits and customs.

05.01 ***Area Studies.*** A group of instructional programs that describe the history, society, politics, culture, and economics of a particular geographic region.

05.0101 *African Studies.* An instructional program that describes the history, society, politics, culture, and economics of Africa.

05.0102 *American Studies.* An instructional program that describes the history, society, politics, culture, and economics of the United States of America.

05.0103 *Asian Studies, General.* An instructional program that describes the history, society, politics, culture, and economics of Asia.

05.0104 *East Asian Studies.* An instructional program that describes the history, society, politics, culture, and economics of East Asia, including, China, Japan, and Korea.

05.0105 *Eastern European Studies.* An instructional program that describes the history, society, politics, culture, and economics of Eastern Europe.

05.0106 *European Studies, General.* An instructional program that describes the history, society, politics, culture, and economics of Europe.

05.0107 *Latin American Studies.* An instructional program that describes the history, society, politics, culture, and economics of Latin America.

05.0108 *Middle Eastern Studies.* An instructional program that describes the history, society, politics, culture, and economics of the countries lying east of the Mediterranean and Aegean Seas to India.

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05.0109 *Pacific Area Studies.* An instructional program that describes the history, society, politics, culture, and economics of Austrialia, New Zealand, and the Pacific Islands.

05.0110 *Russian and Slavic Studies.* An instructional program that describes the history, society, politics, culture, and economics of Russia and the Slavic countries.

05.0111 *Scandinavian Studies.* An instructional program that describes the history, society, politics, culture, and economics of Scandinavia, including Denmark, Norway, Sweden, and Finland.

05.0112 *South Asian Studies.* An instructional program that describes the history, society, politics, culture, and economics of South Asia, including Pakistan, India, and Bangladesh.

05.0113 *Southeast Asian Studies.* An instructional program that describes the history, society, politics, culture, and economics of Southeast Asia, including Vietnam, Cambodia, Laos, Thailand, Burma, and Malaysia.

05.0114 *Western European Studies.* An instructional program that describes the history, society, politics, culture, and economics of Western Europe.

05.0199 *Area Studies, Other.* Any instructional program in area studies not described above.

05.02 ***Ethnic Studies.*** A group of instructional programs that describe the history, society, politics, culture, and economics of subsets of the population sharing common racial characteristics or common traits and customs.

05.0201 *Afro-American (Black) Studies.* An instructional program that describes the history, society, politics, culture, and economics of Afro-Americans.

05.0202 *American Indian Studies.* An instructional program that describes the history, society, politics, culture, and economics of American Indians.

05.0203 *Hispanic-American Studies.* An instructional program that describes the history, society, politics, culture, and economics of Hispanic-Americans.

05.0204 *Islamic Studies.* An instructional program that describes the history, society, politics, culture, and economics of Afro-Asian countries in which the population is predominantly Islamic in religious orientation.

05.0205 *Jewish Studies.* An instructional program that describes the history, society, politics, culture, and economics of the Jewish people.

05.0299 *Ethnic Studies, Other.* Any instructional program in ethnic studies not described above.

05.99 ***Area and Ethnic Studies, Other.*** A group of instructional programs in area and ethnic studies not described above.

05.9999 *Area and Ethnic Studies, Other.* Any instructional program in area and ethnic studies not described above.

06. **Business and Management.** A summary of groups of instructional programs that describe the processes of purchasing, selling, producing, and interchanging of goods, commodities, and services in profit making and non-profit public and private institutions and agencies.

06.01 ***Business and Management, General.*** A group of instructional programs (see 06.0101).

06.0101 *Business and Management, General.* An instructional program that generally describes the processes of purchasing, selling, producing, and interchanging of goods, commodities, and services in profit making and non-profit public and private institutions and agencies.

06.02 ***Accounting.*** A group of instructional programs (see 06.0201).

06.0201 *Accounting.* An instructional program that describes the principles, procedures, and theories of organizing, maintaining, and auditing business and financial transactions.

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06.03 ***Banking and Finance.*** A group of instructional programs (see 06.0301).

06.0301 *Banking and Finance.* An instructional program that describes the financial management of industrial and commercial enterprises; of commercial, savings, and mortgage banking; and of investment analysis and portfolio selection.

06.04 ***Business Administration and Management.*** A group of instructional programs that describe the planning, organizing, and controlling of a business, including organizational and human aspects, with emphasis on various theories of management, the knowledge and understanding necessary for managing people and functions, and decisionmarking.

06.0401 *Business Administration and Management, General.* An instructional program that generally describes the planning, organizing and controlling of a business, including organizational and human aspects, with emphasis on various theories of management, the knowledge and understanding necessary for managing people and functions, and decisionmaking.

06.0402 *Contract Management and Procurement/Purchasing.* An instructional program that describes the methods, techniques, and processes by which contracts are obtained, monitored, and completed.

06.0403 *Product Management.* An instructional program that describes the systematic regulation and control of the manufacturing, fabricating, extracting, or processing of goods.

06.0404 *Systems Efficiency Analysis.* An instructional program that prepares individuals to study the policies, organizational structures, and administrative practices of an organization for the purpose of recommending and installing systems procedures and methods improvements. Includes instruction in the design, implementation, testing, and maintenance of various systems procedures and the preparation of valid technical research to aid engineers, management personnel, and others in effectively installing efficient operational procedures.

06.0499 *Business Administration and Management, Other.* Any instructional program in business administration and management not described above.

06.05 ***Business Economics.*** A group of instructional programs (see 06.0501).

06.0501 *Business Economics.* An instructional program that describes the principles and methods for organizing a business firm and for combining resources to produce goods and services, taking account of costs, profits, and the nature and extent of competition in markets.

06.06 ***Human Resources Development.*** A group of instructional programs (see 06.0601).

06.0601 *Human Resources Development.* An instructional program that describes the principles, methods, and techniques that are used to assess and meet the training and career development needs of employees.

06.07 ***Institutional Management.*** A group of instructional programs that describe the nature and application of management methods and techniques related to specific kinds of institutions.

06.0701 *Hotel/Motel Management.* An instructional program that describes the nature and application of management methods and techniques related to hotels and motels.

06.0702 *Recreational Enterprises Management.* An instructional program that describes the nature and application of management methods and techniques related to recreational enterprises.

06.0703 *Resort Management.* An instructional program that describes the nature and application of management methods and techniques related to resorts.

06.0704 *Restaurant Management.* An instructional program that describes the nature and application of management methods and techniques related to restaurants.

06.0705 *Transporation Management.* An instructional program that describes the nature and application of management methods and techniques related to transportation enterprises.

06.0799 *Institutional Management, Other.* Any instructional program in institutional management not described above.

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06.08 ***Insurance and Risk Management.*** A group of instructional programs (see 06.0801).

06.0801 *Insurance and Risk Management.* An instructional program that describes risk analysis and personal and business insurance and their applications to life, disability, property, liability, and fiduciary trust and annuity underwriting.

06.09 ***International Business Management.*** A group of instructional programs (see 06.0901).

06.0901 *International Business Management.* An instructional program that describes the principles and processes of export sales, trade controls, foreign operations, attitudes, monetary problems, and other areas of concern in the international business environment as it affects, or is affected by, a company's policies, procedures, and products.

06.10 ***Investments and Securities.*** A group of instructional programs (see 06.1001).

06.1001 *Investments and Securities.* An instructional program that describes the securities market, investment concepts, and the effects of economic business cycles on investments. Includes instruction in the study of stocks, mutual funds, bonds, unlisted and listed securities, and yield changes as they affect long-term holdings.

06.11 ***Labor/Industrial Relations.*** A group of instructional programs (see 06.1101).

06.1101 *Labor/Industrial Relations.* An instructional program that describes the history and development of the labor movement, including the analysis and interpretation of Federal and State legislation, union contracts, labor negotiation, conciliation, arbitration, and grievance procedures.

06.12 ***Management Information Systems.*** A group of instructional programs (see 06.1201).

06.1201 *Management Information Systems.* An instructional program that describes computer-based information systems that deal with business data and are generally characterized by logical patterns of clerical work flow from the point of original data gathering to completion of necessary reports and retrieval displays.

06.13 ***Management Science.*** A group of instructional programs that describe the application of mathematical and analytical techniques such as modeling, programming, forecasting, and analysis in the design, implementation, monitoring, and control of organizational processes and operations to determine their purpose and effectiveness, and means for attaining maximum efficiency.

06.1301 *Business Statistics.* An instructional program that describes the application of mathematical and statistical models and methodology in business.

06.1302 *Operations Research (Quantitative Methods).* An instructional program that describes the principles and procedures of analyzing management problems utilizing probability theory, continuous distributions, mathematical programming, queueing theory, Markov processors, replacement maintenance and inventory models, other mathematical models, and simulation and game theory.

06.1399 *Management Science, Other.* Any instructional program in management science not described above.

06.14 ***Marketing Management and Research.*** A group of instructional programs that describe the principles, practices, and concepts involved in the performance of business activities which direct the transfer of goods and the acquisition of services from producer to consumer. Includes instruction in marketing functions and institutions; activities having to do with effecting change in ownership and possession of goods and services; and the study of applied economics relating to the creation of time, place, and possession utility.

06.1401 *Marketing Management.* An instructional program that describes applying marketing skills in a management position in any industry, generally at a mid-management level or in a management-training program, or to advance to more specialized training in marketing.

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06.1402 *Marketing Research.* An instructional program that describes undertaking research activities such as analysis of data on products and sales, the conducting of surveys and interviews, test marketing of new products, and preparation of recommendations to clients or internal management.

06.1499 *Marketing Management and Research, Other.* Any instructional program in marketing management and research not described above.

06.15 ***Organizational Behavior.*** A group of instructional programs (see 06.1501).

06.1501 *Organizational Behavior.* An instructional program that describes the behavior and motivations of individuals functioning in groups, the influence of styles of leadership that may be used by managers, and the means of intervention that may be used to improve interpersonal relations and team behavior.

06.16 ***Personnel Management.*** A group of instructional programs (see 06.1601).

06.1601 *Personnel Management.* An instructional program that describes the methods, principles, procedures, and understandings necessary to manage and administer programs that are directed to the welfare and working conditions of employees in a business or other organization.

06.17 ***Real Estate.*** A group of instructional programs that describe the theories and techniques of buying, selling, appraising, renting, managing, and leasing of real property.

06.1701 *Real Estate, General.* An instructional program that generally describes the theories and techniques of buying, selling, appraising, renting, managing, and leasing of real property.

06.1702 *Commercial Property.* An instructional program that prepares individuals to facilitate and transact transfers of ownership or the leasing of land, nonresidential buildings, and other commercial properties.

06.1703 *Property Management.* An instructional program that describes that principles and methods of managing office buildings, apartment houses, shopping centers, small properties, and other investment property.

06.1704 *Real Estate Appraisal.* An instructional program that describes the techniques of general appraisal of the real estate market, including factors that affect the value of land, construction costs per square foot and cubic foot, factors in residential and commercial appraisals, and the translation of rental income into present value.

06.1705 *Real Estate Finance.* An instructional program that describes the principles and practices governing real estate financing. Includes instruction in mortgage and equity financing, sources of loans, loan procedures, and legislation governing mortgage lending.

06.1706 *Real Estate Law.* An instructional program that describes the legal principles governing real estate transactions, including sales contracts, deeds, mortgages, title insurance, and State laws.

06.1707 *Residential Property.* An instructional program that prepares individuals to facilitate and transact transfers of ownership of housing units for residential occupancy, including recreational properties.

06.1799 *Real Estate, Other.* Any instructional program in real estate not described above.

06.18 ***Small Business Management and Ownership.*** A group of instructional programs that describe the managerial functions and ownership principles involved in operating a small business.

06.1801 *Small Business Management.* An instructional program that describes the management functions, policies, and procedures that are characteristic of small business concerns.

06.1802 *Small Business Ownership.* An instructional program that prepares individuals to undertake the formation and operation of small-business enterprises (including franchise operations) for the purpose of marketing a product line or service, with emphasis given to the social responsibilities, legal requirements, and risks involved in the conduct of a private enterprise.

06.1899 *Small Business Management and Ownership, Other.* Any instructional program in small business management and ownership not described above.

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06.19 ***Taxation.*** A group of instructional programs (see 06.1901).

06.1901 *Taxation.* An instructional program that describes the principles, procedures, and regulations applicable to the maintenance of records and the preparation and filing of income tax returns for individuals, partnerships, corporations, and other types of organizations.

06.20 ***Trade and Industrial Supervision and Management.*** A group of instructional programs (see 06.2001).

06.2001 *Trade and Industrial Supervision and Management.* An instructional program that describes supervising and managing personnel engaged in construction, mechanical repair, manufacturing, transportation, or material moving.

06.99 ***Business and Management, Other.*** A group of instructional programs in business and management not described above.

06.9999 *Business and Management, Other.* Any instructional program in business and management not described above.

07. Business and Office. A summary of groups of instructional programs that prepare individuals for a variety of activities in planning, organizing, directing, and controlling all business office systems and procedures. Includes instruction in preparing, transcribing, systematizing, and preserving written communications and records; preparing and analyzing financial records; collecting accounts and receiving and disbursing money; gathering, processing and distributing information and mail; operating office machines and electronic data processing equipment; storing, distributing, and accounting for inventories of materials; operating telephone switchboards and delivering messages; and performing other business office duties.

07.01 ***Accounting, Bookkeeping, and Related Programs.*** A group of instructional programs that prepare individuals to systematize information about transactions and activities into accounts and quantitative records, verify accuracy of data by applying auditing principles, prepare budgets and financial reports, operate bookkeeping machines, and pay and receive money.

07.0101 *Accounting, Bookkeeping, and Related Programs, General.* An instructional program that generally prepares individuals to systematize information about transactions and activities into accounts and quantitative records, verify accuracy of data by applying auditing principles, prepare budgets and financial reports, operate bookkeeping machines, and pay and receive money.

07.0102 *Accounting and Computing.* An instructional program that prepares individuals to perform paraprofessional duties supporting the accountant in organizing, designing, and computing numerical and financial data.

07.0103 *Bookkeeping.* An instructional program that prepares individuals to compute, classify, and record numerical data to keep financial records and ledgers and prepare tax reports and monthly statements.

07.0104 *Machine Billing, Bookkeeping, and Computing.* An instructional program that prepares individuals to utilize office machines for billing, posting, calculating, adding, listing, and mechanizing data (except data processing equipment); obtain final records of financial activities; and prepare other financial statistical reports and information.

07.0199 *Accounting, Bookkeeping, and Related Programs, Other.* Any instructional program in accounting, bookkeeping, and related programs not described above.

07.02 ***Banking and Related Financial Programs.*** A group of instructional programs that prepare individuals to perform financial or banking services. Includes instruction in credit collection, transit routing of notes and drafts, receiving and paying out money, and functions associated with processing loans and insurance claims.

07.0201 *Banking and Related Financial Programs, General.* An instructional program that generally prepares individuals to perform financial or banking services. Includes instruction in credit collection, transit routing of notes and drafts, receiving and paying out money, and functions associated with processing loans and insurance claims.

07.0202 *Credit Collection Clerk.* An instructional program that prepares individuals to receive, record, and collect notes, drafts, checks, and coupons drawn on local or out-of-town banks; compute interest or finance charges; issue receipts and mail collection statements; and determine the credit status of clients.

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07.0203 *Insurance Clerk.* An instructional program that prepares individuals to examine insurance policies held for commercial or personal loans and property under control of the bank or financial institution; determine adequacy of coverage and insurance requirements; verify cash value and premium of policies; and maintain records concerning bank-owned insurance and fire protection on commodities.

07.0204 *Loan Clerk.* An instructional program that prepares individuals to process applications of individuals and businesses applying for loans and credit; verify credit status and limits considering applicants' assets, experience, and references; notify customers of loan status; maintain records on credit transactions, deposits, payments, and delinquent accounts; adjust incorrect loan statements; and compute interest, payment, or service charges associated with the loan.

07.0205 *Teller.* An instructional program that prepares individuals to receive and pay out money, and keep records of money and negotiable instruments used in various banking and fnancial transactions. Includes instruction in computing finance or service charges and transactions, and in operating various computing and recording office machines used in financial institutions.

07.0206 *Transit Clerk.* An instructional program that prepares individuals to operate machines to sort, record, proof, and prepare all transit items (e.g. check drafts, credit letters) on out-of-city banks to ensure correct routing and prompt collection, and to operate photocopy machines to duplicate transit letters, outgoing checks, and computing machine tapes to keep records of all transit items and their destinations.

07.0299 *Banking and Related Financial Programs, Other.* Any instructional program in banking and related financial programs not described above.

07.03 ***Business Data Processing and Related Programs.*** A group of instructional programs that prepare individuals to analyze and design data processing system configurations; write, test, monitor, debug, and maintain data processing programs; and operate computers and peripheral and data entry equipment.

07.0301 *Business Data Processing and Related Programs, General.* An instructional program that generally prepares individuals to analyze and design data processing system configurations; write, test, monitor, debug, and maintain data processing programs; and operate computers and peripheral and data entry equipment.

07.0302 *Business Computer and Console Operation.* An instructional program that prepares individuals to operate electronic data processing computers. Includes instruction in the review of program instructions, determination of procedures for a specific run, readying equipment for operation, and manipulation and monitoring of controls during operation. Instruction also is given in troubleshooting and all types of on- and off-line operations.

07.0303 *Business Data Entry Equipment Operation.* An instructional program that prepares individuals to operate keypunch or special-purpose key entry devices to convert source documents to machine input media for electronic data processing, verify and correct data, and monitor equipment during operation.

07.0304 *Business Data Peripheral Equipment Operation.* An instructional program that prepares individuals to operate on-line or off-line peripheral equipment such as sorters, collators, high-speed printers, bursting machines, tape-to-card and card-to-tape converters, and scanners.

07.0305 *Business Data Programming.* An instructional program that prepares individuals to convert problems into detailed flow charts; code into computer language; test, monitor, debug, document, and maintain computer programs; and design programs for specific uses and machines.

07.0306 *Business Systems Analysis.* An instructional program that prepares individuals to analyze specific problems for data refinement and summarization; study existing data handling systems to evaluate effectiveness; and develop new systems to meet current and projected data processing needs. Includes instruction in the preparation of technical reports and instructional manuals related to establishment of complete operational data systems.

07.0399 *Business Data Processing and Related Programs, Other.* Any instructional program in business data processing and related programs not described above.

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07.04 ***Office Supervision and Management.*** A group of instructional programs (see 07.0401).

07.0401 *Office Supervision and Management.* An instructional program that prepares individuals to supervise employees; budget, analyze, and coordinate clerical and other office activities; evaluate, organize, and/or revise office operations and procedures to establish uniformity in handling correspondence, records, and other materials; design various office layouts to facilitate maximum production and efficiency; evaluate employee records; and coordinate activities of clerical department and workers.

07.05 ***Personnel and Traning Programs.*** A group of instructional programs that prepare individuals to undertake organizational and facilitating functions associated with personnel administration.

07.0501 *Personnel and Training Programs, General.* An instructional program that generally prepares individuals to undertake organizational and facilitaing functions associated with personnel administration.

07.0502 *Educational Assisting and Training.* An instructional program that prepares individuals in the facilitating functions of an organization dealing with personnel, such as teacher aides in education, training specialists in industry, and test technicians.

07.0503 *Personnel Assisting.* An instructional program that prepares individuals to assist in implementing policies relating to the personnel administration of an organization. Includes instruction in recruitment, selection, training, promotion, welfare, recreation, safety, compensation, and separation of employees.

07.0599 *Personnel and Training Programs, Other.* Any instructional program in personnel and training programs not described above.

07.06 ***Secretarial and Related Programs.*** A group of instructional programs that prepare individuals to record and transcribe communications and to provide administrative support.

07.0601 *Secretarial and Related Programs, General.* An instructional program that generally prepares individuals to record and transcribe communications and to abstract, classify, and file information.

07.0602 *Court Reporting.* An instructional program that prepares individuals to record examination, testimony, judicial opinions, judge's charge to jury, judgement or sentence of court, or other proceedings in court of law by machine shorthand. Includes instruction in the specialized terminology and procedures used in the legal, medical, and insurance fields; skills for recording two-, three- and four-way conversations.

07.0603 *Executive Secretarial.* An instructional program that prepares individuals to assist management by expediting and facilitating the maintenance of executive and corporation records; planning conferences; preparing record notices, minutes, and resolutions; filing corporate legal documents; and assisting in the administration of policy.

07.0604 *Legal Secretarial.* An instructional program that prepares individuals to prepare legal papers and correspondence, such as summonses, complaints, motions, and subpoenas. Includes instruction in legal terminology, procedures, and documents, as well as law library research.

07.0605 *Medical Secretarial.* An instructional program that prepares individuals to perform secretarial duties utilizing a knowledge of medical terminology and hospital, clinic, or laboratory procedures. Includes instruction in writing reports, such as case histories, and understanding legal and insurance forms.

07.0606 *Secretarial.* An instructional program that prepares individuals to carry out administrative and general office duties in a support capacity. Includes instruction in scheduling appointments, giving information to callers, taking and transcribing dictation, and relieving officials of minor administrative and business details.

07.0607 *Stenographic.* An instructional program that prepares individuals to take direct dictation of correspondence, reports, and other materials, by hand or machine and to transcribe dictated materials.

07.0608 *Word Processing.* An instructional program that prepares individuals to edit and produce written communications utilizing special-purpose machines to correct, format, and print information.

07.0699 *Secretarial and Related Programs, Other.* Any instructional program in secretarial and related programs not described above.

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07.07 ***Typing, General Office, and Related Programs.*** A group of instructional programs that prepare individuals to record, duplicate, and retrieve data, including classifying, sorting, and filing correspondence, records, and other data. Includes instruction in shipping and receiving procedures, stock and inventory maintenance, and operation of office machines.

07.0701 Typing, General Office, and Related Programs, General. An instructional program that generally prepares individuals to record, duplicate, and retrieve data, including classifying, sorting, and filing correspondence, records, and other data. Includes instruction in shipping and receiving procedures, stock and inventory maintenance, and operation of office machines.

07.0702 Clerk-Typist. An instructional program that prepares individuals to use a typewriter in a variety of activities, including correspondence and compiling and typing reports, application forms, shipping tickets, and other data from clerical records. Includes instruction in filing records and reports, posting information to records, sorting and distributing mail, answering telephones, and computing with calculating machines.

07.0703 Correspondence Clerk. An instructional program that prepares individuals to compose correspondence and related items for the purpose of obtaining or giving information on merchandise, damage claims, credit, bills, or unsatisfactory service. Includes instruction in preparing materials, using a typewriter, routing correspondence, and keeping records of incoming and outgoing written correspondence.

07.0704 Duplicating Machine Operation. An instructional program that prepares individuals to operate machines for the reproduction of handwritten or typewritten material. Includes instruction in keeping records of the number of copies made and basic duplicating-machine maintenance.

07.0705 General Office Clerk. An instructional program that prepares individuals to perform a variety of clerical duties such as copying data; compiling records and reports; tabulating and posting data in record books; providing information and conducting interviews; operating office machines; and handling mail and correspondence.

07.0706 Mail and Order Clerk. An instructional program that prepares individuals to process incoming and outgoing mail for distribution by stamping, sorting, addressing and readdressing, examining, weighing, and sealing correspondence and keeping records of registered or interoffice mail; process orders for materials or merchandise received by phone, mail, or messenger; route orders to specified departments; inform customers of information related to the order; assist in the preparation of written contracts, invoices, and bills of lading; handle service orders and complaints; and compute price, discount, commission, and shipping charges.

07.0707 Receptionist and Communication Systems Operation. An instructional program that prepares individuals to answer telephone and information requests, keep records of callers, make appointments, interview people to secure required data, and make travel reservations and to operate telephone switchboards and similar equipment, relay incoming and interoffice calls, establish connections between subscribers, supply information, calculate charges, and operate telegraph and similar equipment for transmitting and receiving messages.

07.0708 Shipping, Receiving, and Stock Clerk. An instructional program that prepares individuals to assemble, pack, address, stamp, and record data on outgoing merchandise and materials; receive, unpack, verify contents, and record data on incoming merchandise and materials; make loading and unloading arrangements; store and issure supplies, materials, and equipment; maintain inventories; requisition stock; keep records; and prepare stock and inventory reports.

07.0709 Traffic, Rate, and Transportation Clerk. An instructional program that prepares individuals to calculate and compile freight rates, passenger fares, and other charges for transportation services from rate tables and tariff schedules; utilize maps to select, lay out, and measure travel routes; calculate total freight, storage, redelivery, and reconsignment charges; and answer inquiries from shippers concerning rates, routing, packing, and procedures.

07.0710 Typing. An instructional program that prepares individuals to record data by means of a typewriter or similar device. Includes instruction in typing letters, reports, stenciles, forms, addresses, and other straight-copy material from rough draft or corrected copy, proofreading material typed, and using duplicating materials.

07.0799 Typing, General Office, and Related Programs, Other. Any instructional program in typing, general office, and related programs not described above.

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07.99 ***Business and Office, Other.*** A group of instructional programs in business and office not described above.

07.9999 *Business and Office, Other.* Any instructional progam in business and office not described above.

08. **Marketing and Distribution.** A summary of groups of instructional programs that prepare individuals for occupations directed toward the incident to the flow of industrial and consumer goods in channels of trade, or the provision of services to consumers or users. These programs are concerned with marketing, sales, distribution, merchandising, and management, including ownership and management of enterprises engaged in marketing. Instructional programs prepare individuals to perform one or more of the marketing functions, such as selling, buying, pricing, promoting, financing, transporting, storing, market research, and marketing management. In addition, instructional programs include varying emphases on technical knowledge of products or services marketed, related communication and computation skills, and abilities and attitudes associated with human relations and private enterprise.

08.01 *Apparel and Accessories Marketing.* A group of instructional programs that prepare individuals to perform marketing functions and tasks in retail establishments, wholesale establishments, and manufacturing firms primarily engaged in the marketing of clothing and related articles for personal wear and adornment.

08.0101 *Apparel and Accessories Marketing, General.* An instructional program that generally prepares individuals to perform marketing functions and tasks in retail establishments, wholesale establishments, and manufacturing firms primarily engaged in the marketing of clothing and related articles for personal wear and adornment.

08.0102 *Fashion Merchandising.* An instructional program that prepares individuals to engage in the marketing of apparel and accessories, with particular emphasis given to fashion selling and buying, fashion cycles, fashion coordination, and specialized consulting services.

08.0103 *Fashion Modeling.* An instructional program that prepares individuals to model garments, such as dresses, coats, underclothing, swimwear, and suits, for garment designers, buyers, sales personnel, and customers.

08.0104 *Footwear Marketing.* An instructional program that prepares individuals to engage in the marketing of shoes, boots, slippers, and related items, with particular emphasis given to the functional and fashion aspects of all types of footwear.

08.0105 *Jewelry Marketing.* An instructional program that prepares individuals to engage in the marketing of gems, jewelry, watches, and related items, with special emphasis given to fine jewelry.

08.0199 *Apparel and Accessories Marketing, Other.* Any instructional program in apparel and accessories marketing not described above.

08.02 ***Business and Personal Services Marketing.*** A group of instructional programs that prepare individuals to perform marketing functions and tasks in two types of enterprises: those primarily engaged in providing services to businesses on a fee or contract basis (such as advertising agencies, publishing and broadcasting companies, display services, marketing research and consulting firms, protection agencies, building maintenance firms, and employment agencies), and those providing services to consumers (such as photography studios, barber and beauty shops, gymnasiums, funeral homes, home maintenance firms, pet care centers, and rental business other than vehicle). These programs place emphasis on the marketing activities involved in such enterprises and not on the development of manual or procedural skills that are required to perform a particular service or task. Includes instruction in preparing individuals to perform advertising and merchandise display functions as part of the operation of any enterprise.

08.0201 *Business and Personal Services Marketing, General.* An instructional program that generally prepares individuals to perform marketing functions and tasks in two types of enterprises: those primarily engaged in providing services to business on a fee or contract basis (such as advertising agencies, publishing and broadcasting companies, display services, marketing research and consulting firms, protection agencies, building maintenance firms, and employment agencies), and those providing services to customers (such as photography studios, barber and beauty shops, gymnasiums, funeral homes, home maintenance firms, pet care centers, and rental business other than vehicle). These programs place emphasis on the marketing activities involved in such enterprises and not on the development of manual or procedural skills that are required to perform a particular service or task. Includes instruction in preparing individuals to perform advertising and merchandising display functions as part of the operation of any enterprise.

- - - - - - - *Advertising.* (see 09.0201).

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08.0202 *Display.* An instructional program that prepares individuals to assume responsibilities associated with the creation of product or institutional displays and exhibits for the purpose of stimulating sales and goodwill.

08.0203 *Marketing of Business or Personal Services.* An instructional program that prepares individuals to perform marketing tasks in a business or personal service enterprise, with emphasis on the technical knowledge associated with a particular service field.

08.0299 *Business and Personal Services Marketing, Other.* Any instructional program in business and personal services marketing not described above.

08.03 ***Entrepreneurship.*** A group of instructional programs that prepare individuals to perfom marketing and management functions and tasks associated with owning and operating a business.

08.0301 *Entrepreneurship, General.* An instructional program that generally prepares individuals to perform marketing and management functions and tasks associated with owning and operating a business.

------- *Small Business Management.* (see 06.1801).

------- *Small Business Ownership.* (see 06.1802).

08.04 ***Financial Services Marketing.*** A group of instructional programs that prepare individuals to perform marketing functions and tasks, in financial institutions such as commercial banks, savings and loan associations, credit agencies, credit unions, consumer-finance companies, collection agencies, security and commodity brokerages, and credit departments of business enterprises.

08.0401 *Financial Services Marketing, General.* An instructional program that generally prepares individuals to perform marketing functions and tasks, in financial institutions such as commercial banks, savings and loan associations, credit agencies, credit unions, consumer-finance companies, collection agencies, security and commodity brokerages, and credit departments of business enterprises.

08.0402 *Banking Marketing.* An instructional program that prepares individuals to undertake marketing functions in commercial banks to promote and transact financial and trust services, including financial counseling.

08.0403 *Credit Marketing.* An instructional program that prepares individuals to function as authoritative credit experts in credit departments in various business enterprises.

08.0404 *Credit Union Marketing.* An instructional program that prepares individuals to perform marketing functions in nonprofit financial cooperatives that provide financial services and counseling for the benefit of a defined group of people.

08.0405 *Savings and Loan Marketing.* An instructional program that prepares individuals to undertake marketing functions in savings and loan associations to promote and transact financial services, with major emphasis on negotiating loans.

08.0406 *Securities and Commodities Marketing.* An instructional program that prepares individuals to market the services of brokerages, with major emphasis on the buying and selling of securities and commodities for commercial and private investors.

08.0499 *Financial Services Marketing, Other.* Any instructional program in financial services marketing not described above.

08.05 ***Floristry, Farm and Garden Supplies Marketing.*** A group of instructional programs that prepare individuals to perform marketing functions and tasks in retail, wholesale, and manufacturing establishments; and with growers dealing with live plants, cut flowers, floral arrangements, artificial flowers and plants, garden supplies, equipment, and related items; and seed, fertilizers, and other supplies for farm production.

08.0501 *Floristry, Farm and Garden Supplies Marketing, General.* An instructional program that generally prepares individuals to perform marketing functions and tasks in retail, wholesale, and manufacturing establishments; and with growers dealing with live plants, cut flowers, floral arrangements, artificial flowers and plants, garden supplies, equipment, and related items; and seed, fertilizers, and other supplies for farm production.

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08.0502 *Farm and Garden Supplies Marketing.* An instructional program that prepares individuals to undertake responsibilities associated with the marketing of supplies used in agricultural production, or plants and products used in landscaping and home gardening.

08.0503 *Floristry.* An instructional program that prepares individuals to perform marketing functions associated with retail and wholesale floral and greenhouse operations.

08.0599 *Floristry, Farm and Garden Supplies Marketing, Other.* Any instructional program in floristry, farm and garden supplies marketing not described above.

08.06 ***Food Marketing.*** A group of instructional programs that prepare individuals to perform marketing functions and tasks in retail and wholesale establishments, and in food processing and manufacturing firms that deal primarily with food and beverage products for either home preparation and consumption, or for use in commercial and institutional food service installations.

08.0601 *Food Marketing, General.* An instructional program that generally prepares individuals to perform marketing functions and tasks in retail and wholesale establishments, and in food processing and manufacturing firms that deal primarily with food and beverage products for either home preparation and consumption, or for use in commercial and institutional food service installations.

08.0602 *Convenience Store Marketing.* An instructional program that prepares individuals to perform marketing functions associated with the marketing of a limited line of convenience-food products.

08.0603 *Specialty Foods Marketing.* An instructional program that prepares individuals to undertake responsibilites in marketing at retail a specialty-food line, such as confectionery, bakery, wine and cheese, or meat.

08.0604 *Supermarket Marketing.* An instructional program that prepares individuals to perform marketing functions in large retail food stores.

08.0605 *Wholesale Food Marketing.* An instructional program that prepares individuals to engage in wholesale operations that supply a general or commodity line of food products and beverages to retailers, restaurants, and institutional users.

08.0699 *Food Marketing, Other.* Any instructional program in food marketing not described above.

08.07 ***General Marketing.*** A group of instructional programs that prepare individuals to perform marketing and management functions and tasks that can be applied broadly in any marketing environment. Principles, practices, and procedures are taught without particular identification with a specific kind of enterprise, product, or service. Extensive knowledge of a trade, product, or service area may have been already acquired by persons enrolled, either by prior training or employment experience; others may desire marketing skills for application in any enterprise or subsequent specialized training in marketing. The focus for these instructional programs may be on institutions of marketing, on specific marketing functions, or on unique kinds of marketing activity.

08.0701 *Auctioneering.* An instructional program that prepares individuals to sell articles at an auction to the highest bidder.

08.0702 *Industrial Sales.* An instructional program that prepares individuals to serve as agents or sales representatives for manufacturers and sell a special line of products to other businesses, factories, professional workers, and public and private institutions.

08.0703 *International Marketing.* An instructional program that prepares individuals to perform marketing activities in enterprises primarily engaged in exporting or importing industrial and consumer goods in world markets, with particular emphasis given to trade controls, foreign trade operations, locating markets, negotiation practices, monetary issues, and international public relations.

- - - - - - - *Marketing Management* (see 06.1401).

- - - - - - - *Marketing Research* (see 06.1402).

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08.0704 *Purchasing.* An instructional program that prepares individuals to undertake responsibility for purchasing machinery, raw materials, and product components for manufacturing firms; office supplies, furniture, and business machines for a place of business; or the supplies and equipment needed to conduct a retail or service business.

08.0705 *Retailing.* An instructional program that prepares individuals to apply marketing skills in retail establishments, or to advance to more specialized training in marketing.

08.0706 *Sales.* An instructional program that prepares individuals to apply marketing skills in a selling capacity in any industry, or to advance to more specialized training in marketing.

08.0707 *Wholesaling.* An instructional program that prepares individuals to apply marketing skills in wholesale establishments, or to advance to more specialized training in marketing.

08.0799 *General Marketing, Other.* Any instructional program in general marketing not described above.

08.08 ***Home and Office Products Marketing.*** A group of instructional programs that prepare individuals to perform marketing functions and tasks in retail establishments, wholesale establishments, and manufacturing firms dealing with hardware and building material products and equipment primarily used for furnishing and maintaining the home; or products, equipment, and supplies used in public and private business office operations.

08.0801 *Home and Office Products Marketing, General.* An instructional program that generally prepares individuals to perform marketing functions and tasks in retail establishments, wholesale establishments, and manufacturing firms dealing with hardware and building material products and equipment primarily used for furnishing and maintaining the home; or products, equipment, and supplies used in public and private business office operations.

08.0802 *Appliance Marketing.* An instructional program that prepares individuals to undertake the responsibilities associated with selling and marketing refrigerators, freezers, laundry equipment, stoves, and other electrical or gas appliances.

08.0803 *Building Materials Marketing.* An instructional program that prepares individuals to perform marketing activities primarily associated with the marketing of lumber and a general line of building materials such as millwork, roofing, wallboard, bricks, and cement; heating and air-conditioning equipment; or electrical products and supplies.

08.0804 *Floor Coverings, Draperies, and Upholstery Marketing.* An instructional program that prepares individuals to undertake the responsibilities associated with selling and marketing floor coverings, draperies, and upholstery services.

08.0805 *Furniture Marketing.* An instructional program that prepares individuals to undertake the responsibilities associated with the marketing of furniture and specialized consulting services.

08.0806 *Hardware Marketing.* An instructional program that prepares individuals to perform marketing activities primarily associated with the marketing of a number of basic hardware lines such as tools, builders' hardware, paint and glass, wallcoverings, and related items.

08.0807 *Office Products and Equipment Marketing.* An instructional program that prepares individuals to market a general line of office products and supplies or a specialty line of office furniture or office equipment such as typewriters, data processing equipment, and duplicating equipment.

08.0808 *Specialty Home Furnishings Marketing.* An instructional program that prepares individuals to undertake the responsibilities associated with selling and marketing a specialty line of home furnishings such as tableware, lamps, fireplace equipment, bedding, home-entertainment systems, pianos, and antiques.

08.0899 *Home and Office Products Marketing, Other.* Any instructional program in home and office products marketing not described above.

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08.09 ***Hospitality and Recreation Marketing.*** A group of instructional programs that prepare individuals to perform marketing and management functions and tasks in any business enterprise primarily engaged in satisfying the desire of people to make productive or enjoyable use of leisure time. The hospitality industry includes lodging services and related convention services, and food and beverage services. Recreation includes products and services related to entertainment, sports, hobbies, and cultural activities.

08.0901 *Hospitality and Recreation Marketing, General.* An instructional program that generally prepares individuals to perform marketing and management functions and tasks in any business enterprise primarily engaged in satisfying the desire of people to make productive or enjoyable use of leisure time. The hospitality industry includes lodging services and related convention services, and food and beverage services. Recreation includes products and services related to entertainment, sports, hobbies, and cultural activities.

- - - - - - - *Hotel/Motel Management* (see 06.0701).

08.0902 *Marketing of Hotel/Motel Services.* An instructional program that prepares individuals to assume operational responsibilities associated with marketing the services of hotels and motels.

08.0903 *Marketing of Recreational Services.* An instructional program that prepares individuals to perform sales and marketing tasks in an enterprise which caters to the recreational needs of consumers, with special emphasis given to the technical knowledge associated with a particular recreational service field.

- - - - - - - *Recreational Enterprises Management* (see 06.0702).

08.0904 *Recreational Products Marketing.* An instructional program that prepares individuals to undertake the marketing activities involved in selling or renting a special or full line of supplies and equipment, other than vehicles, used for recreational or sporting purposes.

- - - - - - - *Resort Management* (see 06.0703).

- - - - - - - *Restaurant Management* (see 06.0704).

08.0905 *Waiter/Waitress and Related Services.* An instructional program that prepares individuals to perform tasks designed to increase the sales of a particular restaurant or chain of restaurants.

08.0999 *Hospitality and Recreation Marketing, Other.* Any instructional program in hospitality and recreation marketing not described above.

08.10 ***Insurance Marketing.*** A group of instructional programs that prepare individuals to perform marketing functions and tasks related to the sale and placement of insurance contracts with carriers.

08.1001 *Insurance Marketing, General.* An instructional program that generally prepares individuals to perform marketing functions and tasks related to the sale and placement of insurance contracts with carriers.

08.1002 *Accident and Health Insurance Marketing.* An instructional program that prepares individuals to perform marketing activities associated with underwriting accident and health insurance, including group-hospitalization plans.

08.1003 *Life Insurance Marketing.* An instructional program that prepares individuals to perform marketing activities associated with underwriting life-insurance policies.

08.1004 *Property and Casualty Insurance Marketing.* An instructional program that prepares individuals to perform the marketing activities associated with underwriting fire, marine, and casualty insurance, including automobile and agricultural insurance.

08.1099 *Insurance Marketing, Other.* Any instructional program in insurance marketing not described above.

- - - - - - - ***Real Estate*** (see 06.17).

- - - - - - - *Real Estate, General* (see 06.1701).

- - - - - - - *Commercial Property* (see 06.1702).

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------- *Property Management* (see 06.1703).

------- *Real Estate Appraisal* (see 06.1704).

------- *Real Estate Finance* (see 06.1705).

------- *Real Estate Law* (see 06.1706).

------- *Residential Property* (see 06.1707).

------- *Real Estate, Other* (see 06.1799).

08.11 ***Transportation and Travel Marketing.*** A group of instructional programs that prepare individuals to perform marketing and management functions and tasks in enterprises engaged in passenger and freight transportation, travel services, warehousing, and other services incidental to transportation, storage, travel, or tourism.

08.1101 *Transportation and Travel Marketing, General.* An instructional program that generally prepares individuals to perform marketing and management functions and tasks in enterprises engaged in passenger and freight transportation, travel services, warehousing, and other services incidental to transportation, storage, travel, or tourism.

08.1102 *Freight Transportation Marketing.* An instructional program that prepares individuals to facilitate the provision of any form of transport used for the physical movement of raw materials, products, and personal effects.

08.1103 *Passenger Transportation Marketing.* An instructional program that prepares individuals to facilitate the provision of any form of transport used primarily for the transportation of people.

08.1104 *Tourism.* An instructional program that prepares individuals to assume initiatives in any business, agency, or institution for attracting and serving the traveling public, with the objective of stimulating the local, State, or national economy.

------- *Transportation Management* (see 06.0705).

08.1105 *Travel Services Marketing.* An instructional program that prepares individuals to furnish travel information and to act as agents in arranging tours and transportation, or to act as indepentent ticket agencies for transportation carriers.

08.1106 *Warehouse Services Marketing.* An instructional program that prepares individuals to undertake the marketing responsibilities associated with the storage of farm products, furniture and other household goods, or commercial products of any kind.

08.1199 *Transportation and Travel Marketing, Other.* Any instructional program in transportation and travel marketing not described above.

08.12 ***Vehicles and Petroleum Marketing.*** A group of instructional programs that prepare individuals to perform marketing and management functions and tasks in retail or wholesale establishments engaged in the distribution of petroleum products, or in retail, wholesale, manufacturing, and service establishments engaged in the marketing of cars, vans, trucks, mobile units, boats, other recreational vehicles, tractors, and other farm vehicles and implements, as well as related parts, accessories, equipment, and services.

08.1201 *Vehicles and Petroleum Marketing, General.* An instructional program that generally prepares individuals to perform marketing and management functions and tasts in retail or wholesale establishments engaged in the distribution of petroleum products, or in retail, wholesale, manufacturing, and service establishments engaged in the marketing of cars, vans, trucks, mobil units, boats, other recreational vehicles, tractors, and other farm vehicles and implements, as well as related parts, accessories, equipment, and services.

08.1202 *Agricultural Implements and Machinery Marketing.* An instructional program that prepares individuals to engage in the marketing of various farm implements, machinery, and vehicles.

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08.1203 *Automotive Vehicles and Accessories Marketing.* An instructional program that prepares individuals to engage in the marketing of new and used cars, vans, trucks, and related parts.

08.1204 *Petroleum Wholesaling.* An instructional program that prepares individuals to perform activities involved in wholesale marketing of packaged and bottled petroleum products and gasoline from bulk-liquid-storage facilities and terminals.

08.1205 *Recreational Vehicles and Accessories Marketing.* An instructional program that prepares individuals to engage in the marketing of various kinds of vehicles and conveyances designed for recreational purposes, including boats and bicycles.

08.1206 *Service Station Retailing.* An instructional program that prepares individuals to perform activities involved in retail marketing of gasoline, lubricating oils, and related products in automobile and marine service stations.

08.1207 *Vehicle Rental and Leasing.* An instructional program that prepares individuals to provide marketing services relating to the renting and leasing of vehicles in a business enterprise, such as car-rental systems.

08.1299 *Vehicles and Petroleum Marketing, Other.* Any instructional program in vehicles and petroleum marketing not described above.

08.99 ***Marketing and Distribution, Other.*** A group of instructional programs in marketing and distribution not described above.

08.9999 *Marketing and Distribution, Other.* Any instructional program in marketing and distribution not described above.

09. **Communications.** A summary of groups of instructional programs that describe the creation, transmission, and evaluation of messages.

09.01 ***Communications, General.*** A group of instructional programs (see 09.0101).

09.0101 *Communications, General.* An instructional program that generally describes the creation, transmission, and evaluation of messages.

09.02 ***Advertising.*** A group of instructional programs (see 09.0201).

09.0201 *Advertising.* An instructional program that describes the creation, execution, transmission, and evaluation of commercial messages concerned with the promotion and sale of products and services.

09.03 ***Communications Research.*** A group of instructional programs (see 09.0301).

09.0301 *Communications Research.* An instructional program that describes the research methods and techniques by which the creation, transmission, and evaluation of messages can be facilitated.

09.04 ***Journalism (Mass Communications).*** A group of instructional programs (see 09.0401).

09.0401 *Journalism (Mass Communications).* An instructional program that describes the principles and methods of gathering, processing, evaluating, and disseminating through mass media, information about current events and issues.

09.05 ***Public Relations.*** A group of instructional programs (see 09.0501).

09.0501 *Public Relations.* An instructional program that describes the methods and techniques by which the public can be induced to have understanding for and goodwill towards a person, firm, or institution.

09.06 ***Radio/Television News Broadcast.*** A group of instructional programs (see 09.0601).

09.0601 *Radio/Television News Broadcast.* An instructional program that describes the methods and techniques by which radio and television news programs are produced and broadcasted.

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09.07 ***Radio/Television, General.*** A group of instructional programs (see 09.0701).

09.0701 *Radio/Television, General.* An instructional program that describes the methods and techniques used to produce and broadcast programs on radio and television.

09.99 ***Communications, Other.*** A group of instructional programs in communications not described above.

09.9999 *Communications, Other.* Any instructional program in communications not described above.

10. Communication Technologies. A summary of groups of instructional programs that prepare individuals to support and assist communication professionals and skilled communication workers. Programs stress specialized, practical knowledge related to the mechanical, scientific, or technical aspects of communications.

10.01 ***Communication Technologies.*** A group of instructional programs that prepare individuals to support and assist communication professionals and skilled communication workers. Programs stress specialized, practical knowledge related to the mechanical, scientific, or technical aspects of communications.

10.0101 *Educational Media Technology.* An instructional program that prepares individuals to operate, adjust, make minor repairs for, and diagnose major difficulties in audiovisual devices, equipment, and systems used in education or communication applications, including loud-speaker systems, slides, movie film, or overhead projection equipment and tape-recording equipment. Includes instruction in construction of equipment; the procedures, processes, and techniques for making overhead projection materials, photographic slides, graphs, charts, tables, or other projectable materials; the administration of equipment acquisition, storage, servicing, controlling, and packaging for transportation; cost and maintenance.

10.0102 *Motion Picture Technology.* An instructional program that prepares individuals to support cinematographers or directors in the motion picture industry. Includes instruction in equipment, processes, and procedures used in producing motion pictures; components and systems of devices for photography, lighting, set design, and sound recording; and recording and rerecording sound and special effects.

10.0103 *Photographic Technology.* An instructional program that prepares individuals as highly skilled photographic technicians. Includes instruction in basic and applied physics and chemistry, with the supporting mathematics of photographic processes; light, optics, and optical systems of black-and-white and color photography; the science, design, and function of cameras and related devices such as light meters; source and applications of special photographic light; systems or mechanisms for still photography, moving pictures, photographic composition, potrait photography, and medical photography; techniques for taking, developing, mounting still pictures; and techniques for cutting, splicing, and modifying moving-picture films.

10.0104 *Radio and Television Production and Broadcasting Technology.* An instructional program that prepares individuals to support broadcast managers in the production of materials and the production and broadcasting of materials or programs. Includes instruction in the equipment, processes, and procedures used in producing and making radio or television broadcasts; various components, specialized equipment, and systems of devices employed in broadcast operations; electronic communication, both radio and television; script and program preparation; photographic and audiorecording of material to be broadcast; monitoring, modulating, and controlling the broadcast processes; and recording and storing broadcast materials.

10.0199 *Communication Technologies, Other.* Any instructional program in communications technologies not described above.

11. Computer and Information Sciences. A summary of groups of instructional programs that describe the coding, processing, and storage of data through repetitious and highly complex mathematical operations at high speed, and in accordance with strictly defined systems and procedures.

11.01 ***Computer and Information Sciences, General.*** A group of instructional programs (see 11.0101).

11.0101 *Computer and Information Sciences, General.* An instructional program that generally describes the coding, processing, and storage of data through repetitious and highly complex mathematical operations at high speed, and in accordance with strictly defined systems and procedures.

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11.02 ***Computer Programming.*** A group of instructional programs (see 11.0201).

11.0201 *Computer Programming.* An instructional program that describes the methods and procedures used in flow charting and writing instructions in computer language for the direction of computer operation in the solution of a problem.

11.03 ***Data Processing.*** A group of instructional programs (see 11.0301).

11.0301 *Data Processing.* An instructional program that describes computers and computer programming.

11.04 ***Information Sciences and Systems.*** A group of instructional programs (see 11.0401).

11.0401 *Information Sciences and Systems.* An instructional program that describes the methods for creating, organizing, storing, and accessing organized files of information.

11.05 ***Systems Analysis.*** A group of instructional programs (see 11.0501).

11.0501 *Systems Analysis.* An instructional program that describes the principles and techniques involved in the design of large-scale computer programs. Includes instruction in modeling, flow charting, data organization, and the impact of the programs on organizational objectives.

11.99 ***Computer and Information Sciences, Other.*** A group of instructional programs in computer and information sciences not described above.

11.9999 *Computer and Information Sciences, Other.* Any instructional program in computer and information sciences not described above.

12. Consumer, Personal, and Miscellaneous Services. A summary of groups of instructional programs that prepare individuals to provide a variety of services to individual consumers as well as to organizations such as businesses and industries.

12.01 ***Drycleaning and Laundering Services.*** A group of instructional programs that prepare individuals to operate and manage drycleaning and laundering plants.

12.0101 *Drycleaning and Laundering Services, General.* An instructional program that generally prepares individuals to operate and manage drycleaning and laundering plants.

12.0102 *Drycleaning.* An instructional program that prepares individuals to operate and manage drycleaning plants. Includes instruction in receiving and inspecting garments; identifying spots; dry and wet cleaning; pressing, dyeing, sorting and wrapping apparel, household furnishings and accessories, and leather using various cleaning agents; identifying kinds of fabric; and making minor alterations and repair of articles.

12.0103 *Laundering.* An instructional program that prepares individuals to operate and manage laundering plants. Includes instruction in receiving and inspecting garments; washing, ironing, pressing, dyeing, bleaching, sorting, folding, and wrapping household articles, wearing apparel, and fabrics; using cleaning agents; and using various type of hand and power tools and equipment.

12.0199 *Drycleaning and Laundering Services, Other.* Any instructional program in drycleaning and laundering services not described above.

12.02 ***Entertainment Services.*** A group of instructional programs that prepare individuals to perform a variety of services related to the sale of food, beverages, and entertainment.

12.0201 *Entertainment Services, General.* An instructional program that generally prepares individuals to perform a variety of services related to the sale of food, beverages, and entertainment.

12.0202 *Bartending.* An instructional program that prepares individuals to mix and serve alcoholic and nonalcoholic drinks to patrons of a bar or other drinking establishment, following standard recipes.

12.0203 *Card Dealing.* An instructional program that prepares individuals to run a card game at a casino or other gambling establishment.

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12.0204 *Umpiring.* An instructional program that prepares individuals to officiate at a variety of sporting events.

12.0299 *Entertainment Services, Other.* Any instructional progam in entertainment services not described above.

12.03 ***Funeral Services.*** A group of instructional programs (see 12.0301).

12.0301 *Funeral Services.* An instructional program that prepares individuals to perform sanitary and embalming preparations for interment, in conformity with legal requirements. Includes instruction in human physiology and anatomy, with particular emphasis on the circulatory system; the underlying chemistry and application of embalming compounds and products; the procedures, techniques, and methods used in embalming and preparation for interment, with special emphasis on sanitation and on potential pathological hazards and precautions; and the materials and techniques of applied cosmetology used in preparation for interment.

12.04 ***Personal Services.*** A group of instructional programs that prepare individuals to render a variety of personal services.

12.0401 *Personal Services, General.* A instructional program that generally prepares individuals to render a variety of personal services.

12.0402 *Barbering.* An instructional program that prepares individuals to cut, shampoo, and style hair; and shave; with special attention to hygiene, skin and scalp disease, and equipment sterilization. Instruction qualifies students for licensing examinations.

12.0403 *Cosmetology.* An instructional program that prepares individuals to care for and beautify hair, complexion, and hands by giving shampoos, rinses, and scalp treatments, styling, setting, cutting, dyeing, tinting, permanent waving, and bleaching hair; and giving facials, manicures, and hand and arm massages, with emphasis on hygiene, sanitation, customer relations, and salon management. Instruction qualifies student for licensing examinations.

12.0404 *Electrolysis.* An instructional program that prepares individuals to remove hair, warts, moles, and birthmarks from an individual by means of an electric current applied to the body with a needle-shaped electrode.

12.0405 *Massage.* An instructional program that prepares individuals to administer systematic friction, stroking, slapping, kneading or tapping to stimulate circulation, increase suppleness, promote healing, and induce relaxation in the human body.

12.0499 *Personal Services, Other.* Any instructional program in personal services not described above.

12.99 ***Consumer, Personal, and Miscellaneous Services, Other.*** A group of instructional programs in consumer, personal, and miscellaneous services not described above.

12.9999 *Consumer, Personal, and Miscellaneous Services, Other.* Any instructional program in consumer, personal, and miscellaneous services not described above.

13. **Education.** A summary of groups of instructional programs that describe the art or processes of imparting knowledge, developing the powers of reasoning and judgment, and preparing others intellectually for a more mature life.

13.01 ***Education, General.*** A group of instructional programs (see 13.0101).

13.0101 *Education, General.* An instructional program that generally describes the art or processes of imparting knowledge, developing the powers of reasoning and judgment, and preparing others intellectually for a more mature life.

13.02 ***Bilingual/Bicultural Education.*** A group of instructional programs (see 13.0201).

13.0201 *Bilingual/Bicultural Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, or retrain students in English and another language which may be their native tongue.

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13.03 ***Curriculum and Instruction.*** A group of instructional programs (see 13.0301).

13.0301 *Curriculum and Instruction.* An instructional program that describes the theories, methods, and procedures of designing, controlling, developing, and integrating educational activities and programs.

13.04 ***Education Administration.*** A group of instructional programs that describe the principles and techniques of planning, organizing, developing, staffing, coordinating, managing, researching, evaluating, financing, and controlling educational institutions and agencies.

13.0401 *Education Administration, General.* An instructional program that generally describes the principles and techniques of planning, organizing, developing, staffing, coordinating, managing, researching, evaluating, financing, and controlling educational institutions and agencies.

13.0402 *Administration of Special Education.* An instructional program that describes the principles and techniques of planning, organizing, developing, staffing, coordinating, managing, researching, evaluating, financing, and controlling special education programs and institutions.

13.0403 *Adult and Continuing Education Administration.* An instructional program that describes the principles and techniques of planning, organizing, developing, staffing, coordinating, managing, researching, evaluating, financing, and controlling adult and continuing education programs and institutions.

13.0404 *Educational Supervision.* An instructional program that describes the principles, theories, methods, and practices of directing, controlling, and administering the resources of educational institutions and agencies.

13.0405 *Elementary and Secondary Education Administration.* An instructional program that describes the principles and techniques of planning, organizing, developing, staffing, coordinating, managing, researching, evaluating, financing, and controlling elementary and secondary education programs and institutions.

13.0406 *Higher Education Administration.* An instructional program that describes the principles and techniques of planning, organizing, developing, staffing, coordinating, managing, researching, evaluating, financing, and controlling higher education institutions and agencies.

13.0407 *Community College Education Administration.* An instructional program that describes the principles and techniques of planning, organizing, developing, staffing, coordinating, managing, researching, evaluating, financing, and controlling junior and community college institutions.

13.0499 *Education Administration, Other.* Any instructional program in education administration not described above.

13.05 ***Educational Media.*** A group of instructional programs (see 13.0501).

13.0501 *Educational Media.* An instructional program that describes the principles and techniques of applying various forms of media to the process of instruction and to the production of educational materials.

13.06 ***Evaluation and Research.*** A group of instructional programs that describe the principles and procedures of searching for new knowledge and providing information about educational programs, personnel, methods, and theories.

13.0601 *Evaluation and Research, General.* An instructional program that generally describes the principles and procedures of searching for new knowledge and providing information about educational programs, personnel, methods, and theories.

13.0602 *Adult and Continuing Education Research.* An instructional program that describes the principles and procedures of searching for new knowledge and providing information about adult and continuing education programs, personnel, methods, and theories.

13.0603 *Educational Statistics and Research.* An instructional program that describes the application of mathematical and statistical models and research methodology in education.

13.0604 *Educational Testing, Evaluation, and Measurement.* An instructional program that describes the principles and procedures used in the testing, evaluating, and measuring of educational programs, personnel, methods, and theories.

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13.0605 *Elementary and Secondary Research.* An instructional program that describes the principles and procedures of searching for new knowledge and providing information about elementary and secondary education programs, personnel, methods, and theories.

13.0606 *Higher Education Research.* An instructional program that describes the principles and procedures of searching for new knowledge and providing information about higher education programs, personnel, methods, and theories.

13.0699 *Evaluation and Research, Other.* Any instructional program in evaluation and research not described above.

13.07 ***International and Comparative Education.*** A group of instructional programs (see 13.0701).

13.0701 *International and Comparative Education.* An instructional program that describes the similarities and differences between educational theory and practice in different countries and various cultures for the purpose of deepening understanding and solving educational problems.

13.08 ***School Psychology.*** A group of instructional programs (see 13.0801).

13.0801 *School Psychology.* An instructional program that describes the study, selection, and application of methods, facts, and theories of psychology that relate to individual learning in formal courses of instruction.

13.09 ***Social Foundations.*** A group of instructional programs (see 13.0901).

13.0901 *Social Foundations.* An instructional program that describes the impact and relationship between society and education.

13.10 ***Special Education.*** A group of instructional programs that describe the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students whose physical, emotional, mental, or social needs require a special curriculum and educational setting.

13.1001 *Special Education, General.* An instructional program that generally describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students whose physical, emotional, mental, or social needs require a special curriculum and educational setting.

13.1002 *Education of the Culturally Disadvantaged.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students whose behavior may be in conflict with norms of home, school, or community but is not in conflict with subgroup norms and is not related to personal distress.

13.1003 *Education of the Deaf and Hearing Impaired.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students who have an impairment in hearing which adversely affects their educational performance.

13.1004 *Education of the Gifted and Talented.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students capable of high performance, including those with demonstrated achievement or ability in any one or more of these areas--general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts, or psychomotor ability.

13.1005 *Education of the Emotionally Handicapped.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students exhibiting one or more of the following characteristics which over a long period of time and to a marked degree adversely affects educational performance: (a) an inability to learn which cannot be explained by intellectual, sensory, or health factors; (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (c) inappropriate types of behavior or feelings under normal circumstances; (d) a general pervasive mood of unhappiness or depression; or (e) a tendency to develop physical symptoms or fears associated with personal or school problems.

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13.1006 *Education of the Mentally Handicapped.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students whose impaired mental development adversely affects their educational performance.

13.1007 *Education of the Multiple Handicapped.* An instructional program that describes the theories, methods, and techniques for designing, implementing, and evaluating organized learning activities for students who have a combination of handicaps which adversely affects their educational performance.

13.1008 *Education of the Physically Handicapped.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students who have severe physical impairments which adversely affects their educational performance.

13.1009 *Education of the Visually Handicapped.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students who have a visual impairment which adversely affects their educational performance.

13.1010 *Remedial Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students deficient in the general competencies necessary for a regular curriculum and educational setting.

13.1011 *Specific Learning Disabilities.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students whose perception, communication, or motor skills require a special curriculum and educational setting.

13.1012 *Speech Correction.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students who have a speech impairment which adversely affects their educational performance.

13.1099 *Special Education, Other.* Any instructional program in special education not described above.

13.11 ***Student Counseling and Personnel Services.*** A group of instructional programs (see 13.1101).

13.1101 *Student Counseling and Personnel Services.* An instructional program that describes the theories, methods, functions, operations, and services involved in the personal, social, educational, and vocational development of students and the principles and techniques of managing, directing, and developing an organized unit providing student services within an educational institution.

13.12 ***Teacher Education, General Programs.*** A group of instructional programs that describe the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students at all levels.

13.1201 *Adult and Continuing Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities to meet the unique needs of adults and youths who are beyond the age of compulsory school attendance and who have either completed or interrupted their formal education.

13.1202 *Elementary Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students at the elementary level.

13.1203 *Junior High Education.* An instructional program the describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students at the junior high level.

13.1204 *Pre-Elementary Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students at the pre-elementary level.

13.1205 *Secondary Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students at the secondary level.

13.1299 *Teacher Education, General Programs, Other.* Any instructional program in teacher education, general programs not described above.

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13.13 ***Teacher Education, Specific Subject Areas.*** A group of instructional programs that describe the theories, methods and techniques of designing, implementing, and evaluating organized learning activities for students in specific subject areas.

13.1301 *Agricultural Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, and retrain students in agricultural occupations.

13.1302 *Art Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of art.

13.1303 *Business Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of business.

13.1304 *Driver and Safety Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of driver and safety education.

13.1305 *English Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of English.

13.1306 *Foreign Languages Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of foreign languages.

13.1307 *Health Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of health education.

13.1308 *Home Economics Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, and retrain students for homemaking and wage earning occupations requiring the knowledge and skills of home economics subject matter.

13.1309 *Industrial Arts Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of industrial education.

13.1310 *Marketing and Distributive Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating programs which provide students with various combinations of subject matter and learning experiences related to the flow of goods and services from the producer to the consumer.

13.1311 *Mathematics Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of mathematics.

13.1312 *Music Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of music.

13.1313 *Nutritional Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of nutrition.

13.1314 *Physical Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of physical education.

13.1315 *Reading Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, or retrain students in reading the language arts.

13.1316 *Science Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of life sciences and physical sciences.

13.1317 *Social Science Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of the social sciences.

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13.1318 *Social Studies Education.* An instructional program that describes the theories, methods, and techniques involved in teaching the subject matter of social studies.

13.1319 *Technical Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, or retrain students for job opportunities in specialized technical fields or occupations.

13.1320 *Trade and Industrial Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating programs which prepare, upgrade, or retrain students in a wide range of trade and industrial occupations.

13.1399 *Teacher Education, Specific Subject Areas, Other.* Any instructional program in teacher education, specific subject areas not described above.

13.14 ***Teaching English as a Second Language/Foreign Language.*** A group of instructional programs (see 13.1401).

13.1401 *Teaching English as a Second Language/Foreign Language.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities for students whose native language is not English.

13.99 ***Education, Other.*** A group of instructional programs in education not described above.

13.9999 *Education, Other.* An instructional program in education not described above.

14. Engineering. A summary of groups of instructional programs that describe the mathematical and natural sciences gained by study, experience, and practice and applied with judgement to develop ways to economically utilize the materials and forces of nature for the benefit of mankind.

14.01 ***Engineering, General.*** A group of instructional programs (see 14.0101).

14.0101 *Engineering, General.* An instructional program that generally describes the mathematical and natural sciences gained by study, experience, and practice and applied with judgement to develop ways to economically utilize the materials and forces of nature for the benefit of mankind.

14.02 ***Aerospace, Aeronautical, and Astronautical Engineering.*** A group of instructional programs (see 14.0201).

14.0201 *Aerospace, Aeronautical, and Astronautical Engineering.* An instructional program that describes the design, construction, operation, and maintenance of aircraft, space vehicles, and power units, and to the special programs of flight in both the earth's atmosphere and space, including the flight of air vehicles and the launching, guidance, and control of missiles, earth satellites, and space vehicles and probes.

14.03 ***Agricultural Engineering.*** A group of instructional programs (see 14.0301).

14.0301 *Agricultural Engineering.* An instructional program that describes the design, construction, operation, and maintenance of equipment, structures, machinery, and energy devices for the purpose of improving the production of food and fiber.

14.04 ***Architectural Engineering.*** A group of instructional programs (see 14.0401).

14.0401 *Architectural Engineering.* An instructional program that describes the design and application of materials, components, and structural systems for buildings, including environmental control equipment.

14.05 ***Bioengineering and Biomedical Engineering.*** A group of instructional programs (see 14.0501).

14.0501 *Bioengineering and Biomedical Engineering.* An instructional program that describes the application of engineering and technological concepts, principles, and practices to human and other living systems.

14.06 ***Ceramic Engineering.*** A group of instructional programs (see 14.0601).

14.0601 *Ceramic Engineering.* An instructional program that describes the techniques of designing, developing, and controlling processes that are involved in the manufacture of clay and ceramic-ware, porcelain, china, pottery, and related substances.

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14.07 ***Chemical Engineering.*** A group of instructional programs (see 14.0701).

14.0701 *Chemical Engineering.* An instructional program that describes the nature of chemical processes, heat and mass transfer, the handling and treatment of liquids and gases, and physical and physical-chemical operations.

14.08 ***Civil Engineering.*** A group of instructional programs (see 14.0801).

14.0801 *Civil Engineering.* An instructional program that describes the conception, analysis, design, testing, construction, and operation of structures, transportation components and systems, water resource and conveyance systems, pollution control systems, water treatment systems, and appurtenant works.

14.09 ***Computer Engineering.*** A group of instructional programs (see 14.0901).

14.0901 *Computer Engineering.* An instructional program that describes the principles and techniques of designing and producing the mechanical, magnetic, electrical, and electronic elements of computer hardware and supporting systems.

14.10 ***Electrical, Electronics, and Communications Engineering.*** A group of instructional programs (see 14.1001).

14.1001 *Electrical, Electronics, and Communications Engineering.* An instructional program that describes the theory and application of electrical and electronic systems and their components, including circuits, electromagnetic fields, and energy sources.

14.11 ***Engineering Mechanics.*** A group of instructional programs (see 14.1101).

14.1101 *Engineering Mechanics.* An instructional program that describes the theory and practical application of the action of forces on bodies, with motion, and with statics, kinematics, and kinetics.

14.12 ***Engineering Physics.*** A group of instructional programs (see 14.1201).

14.1201 *Engineering Physics.* An instructional program that describes the physical principles underlying the field of engineering.

14.13 ***Engineering Science.*** A group of instructional programs (see 14.1301).

14.1301 *Engineering Science.* An instructional program that describes the usefulness of such subject matters as physics, chemistry, biology, and mathematics in engineering.

14.14 ***Environmental Health Engineering.*** A group of instructional programs (see 14.1401).

14.1401 *Environmental Health Engineering.* An instructional program that describes the techniques of identification and reduction of pollution, contamination, and deterioration of the natural environment, including the methodology for corrective action.

14.15 ***Geological Engineering.*** A group of instructional programs (see 14.1501).

14.1501 *Geological Engineering.* An instructional program that describes the practical application of scientific principles related to the physical history of the earth, the rocks and soils of which it is composed, and the physical changes in its structure.

14.16 ***Geophysical Engineering.*** A group of instructional programs (see 14.1601).

14.1601 *Geophysical Engineering.* An instructional program that describes the practical application of scientific principles related to the physics of the earth and its environment in space, including phenomena such as fields and forces, mass and motion, time and space, and matter and energy.

14.17 ***Industrial Engineering.*** A group of instructional programs (see 14.1701).

14.1701 *Industrial Engineering.* An instructional program that describes the organization and management of integrated systems of people, materials, and equipment for the purpose of improving production processes.

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14.18 ***Materials Engineering.*** A group of instructional programs (see 14.1801).

14.1801 *Materials Engineering.* An instructional program that describes the structures, reactions, functions, and synthesis of metals, ceramics, plastics, textiles, pulp and paper, wood, and other materials, including the effects of their properties on systems and objects that are constructed from the specified materials.

14.19 ***Mechanical Engineering.*** A group of instructional program (see 14.1901).

14.1901 *Mechanical Engineering.* An instructional program that describes the design, construction, maintenance, and operation of mechanical products and related systems, including production machinery, energy conversion devices, and vehicles.

14.20 ***Metallurgical Engineering.*** A group of instructional programs (see 14.2001).

14.2001 *Metallurgical Engineering.* An instructional program that describes the development and control of processes for extraction of metals from their ores and metal refining, the properties of metals and alloys, and the manufacturing and processing of metals.

14.21 ***Mining and Mineral Engineering.*** A group of instructional programs (see 14.2101).

14.2101 *Mining and Mineral Engineering.* An instructional program that describes the techniques and procedures for locating and appraising mineral deposits, and for designing the equipment and the operation processes for extracting minerals.

14.22 ***Naval Architecture and Marine Engineering.*** A group of instructional programs (see 14.2201).

14.2201 *Naval Architecture and Marine Engineering.* An instructional program that describes the principles and techniques of design, construction, installation, maintenance, and operation of vehicles and equipment operating on or in the water.

14.23 ***Nuclear Engineering.*** A group of instructional programs (see 14.2301).

14.2301 *Nuclear Engineering.* An instructional program that describes the design, development, manufacture, construction, installation, maintenance, and repair of mechanical plants and equipment for the release, control, and utilization of nuclear energy.

14.24 ***Ocean Engineering.*** A group of instructional programs (see 14.2401).

14.2401 *Ocean Engineering.* An instructional program that describes wave action upon sea structures, equipment, and materials, including the development of instrumentation to determine the forces and accelerations of such action.

14.25 ***Petroleum Engineering.*** A group of instructional programs (see 14.2501).

14.2501 *Petroleum Engineering.* An instructional program that describes the processes of recovering and refining crude oil and gas, including the design, development, construction, installation, maintenance, and repair of related physical facilities.

14.26 ***Surveying and Mapping Sciences.*** A group of instructional programs that describe the determination and identification of the shape, contour, location, and dimensions of land or water and their features.

14.2601 *Surveying and Mapping Sciences.* An instructional program that describes the determination and identification of the shape, contour, location, and dimensions of land or water and their features.

14.2602 *Cartography.* An instructional program that describes the principles and techniques involved in designing, planning, and constructing maps.

14.27 ***Systems Engineering.*** A group of instructional programs (see 14.2701).

14.2701 *Systems Engineering.* An instructional program that describes the interacting, interrelated or interdependent elements forming the related engineering system.

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14.28 ***Textile Engineering.*** A group of instructional programs (see 14.2801).

14.2801 *Textile Engineering.* An instructional program that describes the structure, reactions, functions, properties, and synthesis of textiles.

14.99 ***Engineering, Other.*** A group of instructional programs in engineering not described above.

14.9999 *Engineering, Other.* Any instructional program in engineering not described above.

15. Engineering and Engineering-Related Technologies. A summary of groups of instructional programs that prepare individuals to support and assist engineers and other professionals. Programs stress specialized, practical knowledge related to the mathematical, scientific, or technical aspects of engineering and related sciences.

15.01 ***Architectural Technologies.*** A group of instructional programs that prepare individuals to support and assist architects and architectural engineers. Programs stress specialized, practical knowledge related to the mathematical, scientific, or technical aspects of architecture and architectural engineering.

15.0101 *Architectural Design and Construction Technology.* An instructional program that prepares individuals to assist the architect and architectural engineer in planning and designing structures and buildings; testing materials; constructing and inspecting structures; model building and design estimating; utilizing, transporting, and storing construction materials; and dealing with contracts and specifications.

15.0102 *Architectural Interior Design Technology.* An instructional program that prepares individuals to assist architects in planning and designing interior layouts. Includes instruction in designing architectural structures; analyzing and using various types and colors of floor, wall, and ceiling coverings; windows and doors; accoustical materials; functional furnishings; electrical, heating, cooling, and other outlets; and in assessing costs related to design and furnishings.

15.0199 *Architectural Technologies, Other.* Any instructional program in architectural technologies not described above.

15.02 ***Civil Technologies.*** A group of instructional programs that prepare individuals to support and assist civil engineers and urban planners. Programs stress specialized, practical knowledge related to the mathematical, scientific, or technical aspects of civil engineering and urban planning.

15.0201 *Civil Technology.* An instructional program that prepares individuals to assist a civil engineer in designing, surveying, materials control, testing, and building of various structures. Includes instruction in physical sciences; mathematics; surveying; laying out roadways; preparing plans and specifications for the construction of highways, railroads, buildings, dams, and airports; structural detailing and design testing; construction estimating; and operations management.

15.0202 *Drafting and Design Technology.* An instructional program that prepares individuals to assist mechanical, electrical and electronic, architectural, chemical, civil, or other engineers in the design and drafting of electrical circuits, machines, structures, weldments, or architectural plans. Includes instruction in the preparation of engineering plans, layouts, and detailed drawings according to conventional projection principles and techniques or as specified; preparation of charts, graphs, or diagrams; model making; and the use of handbook data germane to design and drafting in various engineering fields.

15.0203 *Surveying and Mapping Technology.* An instructional program that prepares individuals to technically assist civil engineers and urban planners in the determination and description of the shape, contour, location, and dimensions of geographic areas on features.

15.0204 *Urban Planning Technology.* An instructional program that prepares individuals to work as team members with civil engineers, social scientists, and urban-planning professionals. Includes instruction in methods used in urban design and land utilization; methods of demographic study, including population growth, transportation in urban settings, and housing; building and construction codes and regulations; urban traffic management and control; distribution of water and wastewater systems; electrical systems relating to the overall planning for redevelopment of an urban area; urban mapping and engineering drawing; reading architectural or engineering drawings; methods of urban growth determination and projection; cost determination; analysis and comparison of different types of configurations and the sociological aspects of housing, transportation, recreation, park and living space, employment, and logistics in an urban setting.

15.0299 *Civil Technologies, Other.* Any instructional program in civil technologies not described above.

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15.03 ***Electrical and Electronic Technologies.*** A group of instructional programs that prepare individuals to support and assist electrical and electronic engineers, and other engineers and scientists concerned with the development of lasers. Programs stress specialized, practical knowledge related to the mechanical, mathematical, scientific, or technical aspects of electrical engineering, electronic engineering, and laser development.

15.0301 *Computer Technology.* An instructional program that prepares individuals to support engineers and scientists in the design, development, and testing of computer and peripheral devices. Includes instruction in electronic circuitry; prototype development and testing; systems design, selection, installation, and testing; solid state and microminiature circuitry to data storage devices, and the preparation of reports and documentation of test results.

15.0302 *Electrical Technology.* An instructional program that prepares individuals to support an electrical engineer in the design, development, and testing of electrical circuits, devices, and systems, for generating electricity and distributing electrical power. Includes instruction in model and prototype development and testing; systems analysis and integration, including design, development of corrective and preventive maintenance techniques; application of engineering data; and the preparation of reports and test results.

15.0303 *Electronic Technology.* An instructional program that prepares individuals to support the electronic engineer and other professionals in the design, development, modification, and testing of electronic circuits, devices, and systems. Includes instruction in practical circuit feasibility; prototype development and testing; systems analysis, including design, selection, installation, calibration, and testing; solid-state and microminiature circuits; and the application of engineering data to specific problems in the electronics field.

15.0304 *Laser Electro-Optic Technology.* An instructional program that prepares individuals to assist engineers, scientists, or plant managers in the assembly, installation, testing, adjustment, and operation of various types of lasers for various applications. Includes instruction in safety precautions and the optical, physical, and chemical theory and application of each laser device.

15.0399 *Electrical and Electronic Technologies, Other.* Any instructional program in electrical and electronic technologies not described above.

15.04 ***Electromechanical Instrumentation and Maintenance Technologies.*** A group of instructional programs that prepare individuals either to support or assist mechanical and electrical engineers, or to install and service electromechanical equipment. Programs stress specialized, practical knowledge related to the mechanical, mathematical, scientific, or technical aspects of mechanical and electrical engineering, biomedical engineering, computer science, and instrumentation design.

15.0401 *Biomedical Equipment Technology.* An instructional program that prepares individuals to manufacture, install, calibrate, operate, and maintain sophisticated life-support equipment found in hospitals, medical centers, and research laboratories. Includes instruction in the use of testing and diagnostic instruments; calibrating techniques; potential hazards and safety precautions; and methods of installation, repair, maintenance, and operation of the equipment.

15.0402 *Computer Servicing Technology.* An instructional program that prepares individuals to install, program, operate, maintain, service, and diagnose operational problems in computer systems arising from mechanical or electrical malfunctions in computer units or systems. Includes instruction in the underlying physical sciences and supporting mathematics of computer design, installation, construction, programming, operation, maintenance, and functional diagnosis, and how to detect, isolate, and correct malfunctions. Programs describe the electrical and electronic circuits and mechanical devices used in computer construction and their combination into systems in individual computers or computing installations, as well as instruments used to detect weaknesses or failures in electrical systems in computers.

15.0403 *Electromechanical Technology.* An instructional program that prepares individuals to assist mechanical and electrical engineers and other managers in the design, development, and testing of electromechanical devices and systems such as plant automation, automated control systems, servomechanisms, vending machines, elevator controls, missile controls, tape-control machines, and auxiliary computer equipment. Includes instruction in assisting with feasibility testing of engineering concepts; systems analysis (including design, selection, testing, and application of engineering data); and the preparation of written reports and test results.

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15.0404 *Instrumentation Technology.* An instructional program that prepares individuals to design, develop prototypes for, test, and evaluate control or measurement devices on systems, and to prepare graphs, written reports, and test results in support of the professional personnel working in the field of instrumentation. Includes instruction in the fields of electricity, electronics, mechanics, pneumatics, and hydraulics as they pertain to the principles of control, recording systems, automated devices, and the calibration of instrumentation units or systems.

15.0499 *Electromechanical Instrumentation and Maintenance Technologies, Other.* Any instructional program in electromechanical instrumentation and maintenance technologies not described above.

15.05 ***Environmental Control Technologies.*** A group of instructional programs that prepare individuals to assist in controlling either the internal temperature of commercial and industrial buildings, or the levels of toxicity of industrial wastes.

15.0501 *Air Conditioning, Heating, and Refrigeration Technology.* An instructional program that prepares individuals to work in engineering departments or independently as entrepreneurs capable of designing, installing, maintaining, and operating small or medium air conditioning, heating, and refrigeration systems. Instruction prepares individuals to work in a commercial organization performing special tasks relating to design, assembly, installation, servicing, operation, and maintenance of heating or cooling systems, according to the standards of the American Society of Heating, Refrigeration, and Air Conditioning Engineers, Inc. Includes instruction in air conditioning, heating, and refrigeration devices, equipment, techniques, and systems; evaluation of amount of heating, air conditioning, or refrigeration capacity needed to accomplish a particular task; and in the maintenance and operation of a system that meets the requirements of the task.

15.0502 *Air Pollution Control Technology.* An instructional program that prepares individuals to detect, measure, and control air pollution. Includes instruction in the chemistry of combustion from which the majority of polluting elements in the air are derived; the major sources of air pollution, such as internal combustion engines, power plants, and industrial or home use of fuels; methods of sampling smokestacks; detection and source identification and analysis of air pollutants, both gaseous and particulate; and the construction, use, calibration, and maintenance of automatic samplers, recorders, and other analytical devices.

15.0503 *Energy Conservation and Use Technology.* An instructional program that prepares individuals to support engineers or work independently to identify and measure quantities of energy used in heating and cooling or operating a facility or industrial process; assess efficiency in the use of energy or the amount lost through wasteful processes or lack of insulation; and prescribe remedial steps to conserve energy within the system. Includes instruction in the utilization and conversion of energy in its various forms; techniques for improving use or preventing loss of energy; and the quantification of the net minimum or optimum energy required in a given system or process.

15.0504 *Sanitation Technology.* An instructional program that prepares individuals to support sanitarians, and others responsible for health and sanitation factors, by determining the nature and amount of bacteria and chemical contaminants in water, wastewater, and food processing. Includes instruction in sampling, culturing, and identifying pathogenic or other organisms; determining the relative amounts of contaminants in food, soil, water, or other materials by taking samples and performing analyses using sophisticated chemical and biological equipment and procedures; and sanitation-related aspects of water and wastewater purification and processing systems and food processing, storage, and service. Programs prepare individuals for the licensure or certification that is required in some states for employment in government sanitation or health-related agencies.

15.0505 *Solar Heating and Cooling Technology.* An instructional program that prepares individuals to work with heating, cooling, and refrigeration engineers and scientists in research, design, installation, and maintenance for maximum efficiency of solar heating units for space heating, cooling, and water heating for factory, home or institutional use. Includes instruction in the design and dynamics of solar heat collecting systems; heat collection, storage, and distribution in modern heating and cooling systems; theory, procedures, and measuring devices for air conditioning, heating, and refrigeration systems; and the individual mechanisms and controls used in solar heat collecting units for air conditioning, heating, or refrigeration systems.

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15.0506 *Water and Wastewater Technology.* An instructional program that prepares individuals to process, purify, store, control pollution in, distribute, and dispose of wastewater. Includes instruction in the design, construction, operation, and maintenance of equipment for water or wastewater collection, processing, pollution control, and distribution; operation of machines, devices, and control systems which use sophisticated modern instrumentation; testing of samples of materials at various stages in the process design; hydraulics; liquid collection; liquid-processing equipment; pumping and conveying; sampling and testing, both chemically and biologically; processes of purification, digestion, biological deterioration, and disintegration of wastewater products; plant layout, operation, and safety; and the regulations and standards controlling water or wastewater purification.

15.0599 *Environmental Control Technologies, Other.* Any instructional program in environmental control technologies not described above.

15.06 ***Industrial Production Technologies.*** A group of instructional programs that prepare individuals to supervise industrial processes or to support engineers, scientists, and other professionals who are employed by industry. Programs describe the mechanical, scientific, or technical aspects of a variety of industries, including chemical manufacturing, food processing, forest products, marine products, plastics, and textiles.

15.0601 *Chemical Manufacturing Technology.* An instructional program that prepares individuals to support chemists in the chemical-manufacturing field. Includes instruction in material handling, crushing, grinding, and sizing; extraction, distillation, evaporation, drying, absorption, and heat transfer; and assisting in design, installation, and operation of pilot-plants for chemical-manufacturing processes.

15.0602 *Food Processing Technology.* An instructional program that prepares individuals to assist food chemists and food-processing engineers in processing raw foodstuffs into marketable food products by selecting and grading raw materials, and by industrial processes for extracting, converting, drying, freezing, preserving, canning, pickling, smoking, radiation, chemically treating, and packaging products. Includes instruction in the basic sciences and supporting mathematics of chemistry, microbiology, and physics as they relate to food processing, and in the processes, equipment, sanitation, inspection, handling procedures and techniques, process control and scheduling, product storage, shipping, and cost analyses of alternative processes in the industry as applied to specific products and localities.

15.0603 *Industrial Technology.* An instructional program that prepares individuals to assist an industrial engineer in production and planning; design and installation of integrated systems of materials, equipment, and personnel; and measurement, testing, and management of quality control in the manufacturing, transportation, assembly, installation, and operation of processes and products. Includes instruction in the operating of testing equipment (destructive and nondestructive), measuring devices, specification reading, and design and measurement for levels of tolerance compatible with overall production specifications.

15.0604 *Manufacturing Technology.* An instructional program that prepares individuals to technically assist in the optimization of the design, construction, and application of machinery tools, equipment, and processes used in the production of goods.

15.0605 *Marine Products Technology.* An instructional program that prepares individuals to supervise processing of marine products, including seaweed, non-vertebrate, and vertebrate marine products. Includes instruction in the anatomy and identification of marine products; the construction, mechanics, and operation of equipment; procedures, techniques, and sanitation aspects of processing, including refrigeration and chemical preservation; safe working practices; sanitation and inspection; and potential chemical, biological or bacteriological problems encountered, including any pathological condition of the product during processing.

15.0606 *Optical Technology.* An instructional program that prepares individuals to grind lenses from optical glass or from modern plastic, according to engineering specifications or optometrist prescriptions.. Includes instruction in the science of optics, optical glass, and plastics used in optics; optical design and drawings; machinery, materials, and techniques required for production of optical lenses; and in the polishing of lenses or optical elements for mounting in eyeglasses or holding devices.

15.0607 *Plastic Technology.* An instructional program that prepares individuals to support plastic design engineers, scientists, managers, or entrepreneurs in the application, production, and fabrication of plastic products. Includes instruction in the chemistry and applied engineering sciences related to thermosetting, pressing, forming, molding, and producing of fiberglass or other plastics; drawings for dies, forms molds, or plastic assemblies; molding, extruding, jointing, finishing, inspecting, and controlling the quality of the products; packaging for shipment of storage; and hazards associated with production and design.

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15.0608 *Safety Technology.* An instructional program that prepares individuals to technically assist in the maintenance of materials, equipment, and personnel for industrial, commercial, and fire safety systems.

15.0609 *Textile Technology.* An instructional program that prepares individuals to assist scientists, engineers, or managers in the textile industry or in related research, development, production, or servicing. Includes instruction in the nature and characteristics of textile fibers; spinning, weaving, dyeing, mordanting, fireproofing, and static arresting; testing of fibers for tensile strength, heat resistance, crease resilicency, and laundering; equipment and machines used in marking textiles; and textile production, packaging, storage, shipment and uses.

15.0610 *Welding Technology.* An instructional program that prepares skilled workers at the technician level to understand, perform, and supervise or inspect a wide variety of welding processes. These include gas welding, brazing, flame cutting, metallic arc welding (manual or automatic), metallic gas or inert gas welding of ferrous and nonferrous materials, resistance welding, and fusing of glass and plastics in a welding mode. Includes instruction in the applied physics and metallurgy of the various welding processes and techniques, the composition and metallurgy of the various metals, the chemistry and physics of the welding processes, the shielding elements in the welding processes, and the various types of equipment used to accomplish each process. Programs develop an elemental understanding of design for welding fabrication; an understanding of the elements of cost and economics of welding of various types; a knowledge of the methods of nondestructive and destructive inspection of welding and welded products; and an understanding of auxiliary equipment used in the process, such as jigs, fixtures, and annealing equipment related to welding.

15.0699 *Industrial Production Technologies, Other.* Any instructional program in industrial production technologies not described above.

15.07 ***Quality Control and Safety Technologies.*** A group of instructional programs that prepare individuals to support a variety of engineers and industrial managers. Programs describe the mechanical, scientific, or technical aspects of industrial production, occupational health, and quality control.

15.0701 *Occupational Safety and Health Technology.* An instructional program that prepares individuals to work with safety engineers and managers in analyzing working conditions in places of employment to ensure maximum safety to workers and occupants. Includes instruction in safety engineering principles and science; related Federal, State, and local legislation; procedures, practices, techniques, and methods used in analyzing all aspects of working conditions in an employment establishment, including physical, water, atmospheric, and other environmental elements which may constitute hazards; determination of potentially unsafe working practices; chemical contamination of workers through the air they breathe; methods for correcting unsafe conditions or preventing them; cost analysis of various corrective measures for working conditions or practices on the job; capability in reading engineering drawings; and use of orthographic projection practices in drawing, diagramming, or sketching safety devices or plant layouts.

15.0702 *Quality Control Technology.* An instructional program that prepares individuals to support engineers or managers by utilizing the sciences of measurement and quality control, quality design, production and inspection, testing (both destructive and nondestructive), statistical sampling, and mathematical probability as it relates to quality control in mass-produced items manufactured by modern production procedures and processes. Includes instruction in the intensive study of the physical and related engineering sciences and supporting mathematics related to material testing devices; testing; inspection techniques; organization of systems of quality control; statistical sampling; management of quality in manufacturing, transportation, assembly, installation, and operation; assurance of maximum accuracy or quality control in all phases of manufacturing; and utilization of all components and units in modern sophisticated machine devices or systems. Special study is required to understand the operation of testing equipment (particularly nondestructive equipment), measuring devices, reading of specifications, design and measuring of tolerances to assure that a certain level of quality will be met in producing a component, unit, or system. Includes instruction in the preparation of scientific or technical reports and in the development of interpersonal skills required in the performance of tasks or in the supervision of the work of others.

15.0799 *Quality Control and Safety Technologies, Other.* Any instructional program in quality control and safety technologies not described above.

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15.08 ***Mechanical and Related Technologies.*** A group of instructional programs that prepare individuals to support and assist a variety of engineering professionals, including aeronautical, agricultural, automotive, mechanical, electrical and electronic, architectural, chemical, civil, mining, and petroleum engineers. Programs describe the mathematical, mechanical, scientific, and technical aspects of these engineering specialties.

15.0801 *Aeronautical Technology.* An instructional program that prepares individuals to assist the aeronautical engineer in collecting research data relevant to the operation of aircraft and the design, testing, and development of propulsion, control, and guidance systems of aircraft and aerospace vehicles.

15.0802 *Agricultural Equipment Technology.* An instructional program that prepares individuals to assist agricultural engineers. Includes instruction in farm machinery, farm structures, and rural electrification.

15.0803 *Automotive Technology.* An instructional program that prepares individuals to support an automotive engineer in diagnosing normal or abnormal operation and in maintaining and repairing automotive equipment. Includes instruction in the installation, maintenance, operation, repair, adjustment, or modification of automobiles, trucks, buses, and light industrial or farm equipment powered by gasoline, diesel, or turbine engines and equipped with electrical, hydraulic, pneumatic, or mechanical controls. Also includes instruction in the use and calibration of diagnostic and testing instruments and equipment.

15.0804 *Marine Propulsion Technology.* An instructional program that prepares individuals to support propulsion engineers, ship officers, managers of marine units and fleets, or to work as manufacturers' representatives of marine propulsion units. Includes instruction in various marine propulsion units and systems and their related controls; various fuels and fuel systems and problems and hazards involved in their use; power capacity of various units; the basic design, installation, operation and maintenance and servicing of various marine propulsion units and systems; the use and design of cooling systems; operational controls; cost efficiency of various alternative propulsion systems and maintaining operation and service logs.

15.0805 *Mechanical Design Technology.* An instructional program that prepares individuals to assist a mechanical-design or equipment-systems engineer in designing, detailing, producing, and testing machines, using appropriate available materials, processes, techniques, and facilities. Includes instruction in drafting; strength of materials; manufacturing or fabrication procedures and practices; materiel testing; component inspection; machine or unit operation; evaluation; basic physics and mechanics, and the supporting mathematics; basic mechanisms; hydraulics and pneumatics; quality control and testing; machine design; materials; specification preparation; and technical reporting.

15.0899 *Mechanical and Related Technologies, Other.* Any instructional program in mechanical and related technologies not described above.

15.09 ***Mining and Petroleum Technologies.*** A group of instructional programs that prepare individuals to support and assist mining and petroleum engineers and managers. Programs stress specialized, practical knowledge related to the mechanical, scientific, or technical aspects of mining and petroleum engineering.

15.0901 *Coal Mining Technology.* An instructional program that prepares individuals to assist mining engineers or managers or to assume responsiblity with a degree of independence in various aspects of mining operation. Includes instruction in methods, equipment, processes, techniques, and procedures employed in underground coal mining or in strip mining; coal beneficiation and conditioning for marketing; mapping and planning the exploitation of a coal field; managing for safe mining operations; disposing of mine waste; reclaiming strip-mine areas after coal has been removed; testing and analyzing the quality of coal; measuring the levels of impurities in air in mines and identifying the nature of the impurities; constructing, operating, and maintaining specialized machinery and equipment; and planning for maximum exploitation of deposits of coal by the most economical modern methods.

15.0902 *Mining (Excluding Coal) Technology.* An instructional program that prepares individuals to work in a supportive role to mining engineers and managers in the development and exploitation of metal or other mineral ore deposits (excluding coal and other fossil fuels). Includes instruction in elementary geology; mechnical drawing and drafting; mining methods, both open pit and underground; surveying as it applies to planning the mining of a particular ore body; mining machinery; equipment and methods used in drilling, blasting, conveying, hoisting, crushing, and beneficiation; mine safety; environmental impact; production, storage, and disposal of solid or liquid wastes; and collecting, screening, filtering, drying, processing, storing, and shipping of finished ore.

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15.0903 *Petroleum Technology.* An instructional program that prepares individuals to assist in petroleum production, on-shore or off-shore exploring for petroleum fields; seismic testing of promising geological formations; drilling test wells; improving drilling technology; analyzing cores from drilling; logging cores; collecting petroleum from producing wells; delivering oil to holding points or pipelines for transporting to refineries; or capturing gas and retaining it in holding points for marketing. Includes instruction in the methods for increasing productivity of oil fields; seismic exploration; sophisticated scientific and production methods; instrumentation, machinery, equipment, techniques, and processes used in obtaining and refining crude oil into salable products; oil- or gas-well drilling; oil- or gas-well control by use of drilling muds or other techniques; charting and diagraming oil fields, oil wells, and pipelines; and designing refineries.

15.0999 *Mining and Petroleum Technologies, Other.* Any instructional program in mining and petroleum technologies not described above.

15.99 ***Engineering and Engineering-Related Technologies, Other.*** A group of instructional programs in engineering and engineering-related technologies not described above.

15.9999 *Engineering and Engineering-Related Technologies, Other.* Any instructional program in engineering and engineering-related technologies not described above.

16. **Foreign Languages.** A summary of groups of instructional programs that describe the structure and use of language that is common or indigenonous to people of the same community or nation, the same geographical area, or the same cultural traditions; including such features as sounds, literature, syntax, phonology, morphology, semantics, sentences, prose and verse, as well as the development of skills and attitudes used in communicating and evaluating thoughts and feelings through oral and written language.

16.01 ***Foreign Languages, Multiple Emphasis.*** A group of instructional programs (see 16.0101).

16.0101 *Foreign Languages, Multiple Emphasis.* An instructional program tht describes the language, literature, and culture of more than one specific group of people.

16.02 ***African (Non-Semitic) Languages.*** A group of instructional programs (see 16.0201).

16.0201 *African (Non-Semitic) Languages.* An instructional program that describes the language, literature, and culture of non-Semitic African people; languages such as Ibo, Swahili, and Yoruba are included in this category.

16.03 ***Asiatic Languages.*** A group of instructional programs that describe the language, literature, and culture of Asiatic peoples; languages such as Cantonese, Mandarin, Japanese, Korean, Malay, and Japanese are included in this category.

16.0301 *Chinese.* An instructional program that describes the language, literature, and culture of Chinese-speaking peoples; languages such as Cantonese and Mandarin are included in this category.

16.0302 *Japanese.* An instructional program that describes the language, literature, and culture of Japanese-speaking peoples.

16.0303 *Korean.* An instructional program that describes the language, literature, and culture of Korean-speaking peoples.

16.0399 *Asiatic Languages, Other.* Any instructional program in Asiatic languages not described above.

16.04 ***Balto-Slavic Languages.*** A group of instructional programs that describe the language, literature, and culture of Baltic and Slavic peoples; languages such as Latvian, Lithuanian, Russian, Polish, Belorussian, Czech, Serbo-Croatian, and Ukranian are included in this category.

16.0401 *Baltic Languages.* An instructional program that describes the language, literature, and culture of Baltic peoples; languages such as Latvian or Lettish and Lithuanian are included in this category.

16.0402 *Russian.* An instructional program that describes the language, literature, and culture of Russian-speaking peoples.

16.0403 *Slavic Languages (Other than Russian).* An instructional program that describes the language, literature, and culture of Slavic-speaking (other than Russian-speaking) peoples; languages such as Polish, Belorussian, Czech, Serbo-Croatian and Ukranian are included in this category.

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16.05 ***Germanic Languages.*** A group of instructional program that describe the language, literature, and culture of people whose native language belongs to the Germanic branch of Indo-European languages; languages such as German, Norwegian, Swedish, Danish, and Yiddish are included in this category.

16.0501 *German.* An instructional program that describes the language, literature, and culture of German-speaking peoples.

16.0502 *Scandinavian Languages.* An instructional program that describes the language, literature, and culture of Scandinavian peoples; languages such as Norwegian, Swedish, and Danish are included in this category.

16.0503 *Yiddish.* An instructional program that describes the language, literature, and culture of Yiddish-speaking peoples.

16.0599 *Germanic Languages, Other.* Any instructional program in Germanic languages not described above.

16.06 ***Greek.*** A group of instructional programs that describe the language, literature, and culture of Greek-speaking peoples.

16.0601 *Greek (Classical).* An instructional program that describes the language, literature, and culture of the ancient Greek world.

16.0602 *Greek (Modern).* An instructional program that describes the language, literature, and culture of Greek-speaking peoples in the modern world.

16.07 ***Indic Languages.*** A group of instructional programs that describe the language, literature, and culture of people whose native language belongs to the Indic branch of Indo-European languages; languages such as Hindi, Sanskrit, Urdu, Bengali, and Panjabi are included in this category.

16.0701 *Hindi.* An instructional program that describes the language, literature, and culture of Hindi-speaking peoples.

16.0702 *Sanskrit.* An instructional program that describes the language, literature, and culture of Sanskrit-speaking peoples.

16.0799 *Indic Languages, Other.* Any instructional program in Indic languages not described above.

16.08 ***Iranian Languages.*** A group of instructional programs (see 16.0801).

16.0801 *Iranian Languages.* An instructional program that describes the language, literature, and culture of Iranian peoples; languages such as Persian and Pashto are included in this category.

16.09 ***Italic Languages.*** A group of instructional programs that describe the language, literature, and culture of people whose native language belongs to the Italic branch of Indo-European languages; languages such as French, Italian, Latin, Portuguese, and Spanish are included in this category.

16.0901 *French.* An instructional program that describes the language, literature, and culture of French-speaking peoples.

16.0902 *Italian.* An instructional program that describes the language, literature, and culture of Italian-speaking peoples.

16.0903 *Latin.* An instructional program that describes the language and literature of Latin.

16.0904 *Portuguese.* An instructional program that describes the language, literature, and culture of Portuguese-speaking peoples.

16.0905 *Spanish.* An instructional program that describes the language, literature, and culture of Spanish-speaking peoples.

16.0999 *Italic Languages, Other.* Any instructional program in Italic languages not described above.

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16.10 ***Native American Languages.*** A group of instructional programs (see 16.1001).

16.1001 ***Native American Languages.*** An instructional program that describes the language, literature, and culture of native American peoples.

16.11 ***Semitic Languages.*** A group of instructional programs that describe the language, literature, and culture of Semitic peoples; languages such as Arabic and Hebrew are included in this category.

16.1101 ***Arabic.*** An instructional program that describes the language, literature, and culture of Arabic-speaking peoples.

16.1102 ***Hebrew.*** An instructional program that describes the language, literature, and culture of Hebrew-speaking peoples.

16.1199 ***Semitic Languages, Other.*** Any instructional program in Semitic languages not described above.

16.99 ***Foreign Languages, Other.*** A group of instructional programs in foreign languages not described above.

16.9999 ***Foreign Languages, Other.*** Any instructional program in foreign languages not described above.

17. Allied Health. A summary of groups of instructional programs that prepare individuals to assist qualified health professionals in providing diagnostic, therapeutic, preventive , restorative, and rehabilitative services to patients in health care facilities, the home, and the community.

17.01 ***Dental Services.*** A group of instructional programs that prepare individuals to provide supportive services to the dental profession, including performing dental prophylactic treatments, instructing persons in the care of teeth and mouth, and producing dentures and related appliances.

17.0101 ***Dental Assisting.*** An instructional program that prepares individuals to assist a dentist at the chairside in a dental operation, to perform reception functions, clerical functions, and selected dental laboratory procedures.

17.0102 ***Dental Hygiene.*** An instructional program that prepares individuals to provide chairside services to patients (such as performing complete oral prophylaxis and applying medication) and to provide dental health education services to individuals and community health programs, under the supervision of a dentist.

17.0103 ***Dental Laboratory Technology.*** An instructional program that prepares individuals to make and repair restorative appliances required for the oral health of the patient, as prescribed by a dentist.

17.0199 ***Dental Services, Other.*** Any instructional program in dental services not described above.

17.02 ***Diagnostic and Treatment Services.*** A group of instructional programs that prepare individuals to use equipment and medical materials for diagnostic and therapeutic purposes by learning to apply roentgen rays and radioactive substances; prepare and administer radioisotopes; operate electrocardiograph, electroencephalograph, respiratory, or dialysis equipment; provide technical assistance before, during, and after an operation; or render medical emergency treatment in a variety of situations that demand immediate care, such as heart attacks, childbirth, poisons, burns, and shock.

17.0201 ***Cardiopulmonary Technology.*** An instructional program that prepares individuals to perform a wide range of tests related to the functions and therapeutic care of the heart-lung system, operate and maintain a heart-lung machine for extra-corporeal circulation, assist in cardiac catheterization and cardiac resuscitation, and assist in the post-operative monitoring, care, and treatment of heart-lung patients.

17.0202 ***Dialysis Technology.*** An instructional program that prepares individuals to provide dialysis and intensive care to patients in a renal service, including cardiac monitoring, respiratory therapy, isolation procedures, and adjustment and maintenance of dialysis equipment.

17.0203 ***Electrocardiograph Technology.*** An instructional program that prepares individuals to operate and maintain an electrocardiograph machine to record electromotive variations in the action of the patient's heart muscle. Includes instruction in making minor repairs.

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17.0204 *Electroencephalograph Technology.* An instructional program that prepares individuals to operate and maintain the electroencephalograph to measure impulse frequencies and differences in electrical potential between the various areas of the brain to obtain data for the physician to use in diagnosing brain disorders. Includes instruction in making minor repairs.

17.0205 *Emergency Medical Technology – Ambulance.* An instructional program that prepares individuals to function at the emergency level to treat various cardiopulmonary problems, using cardiac resuscitation and other emergency equipment; airway, fracture, and hemorrhage management; emergency childbirth; and special care of patients exposed to heat, cold, radiation, or contagious disease. Includes instruction in techniques and application of intravenous fluid therapy, pharmacology, and anesthetics.

17.0206 *Emergency Medical Technology – Paramedic.* An instructional program that prepares individuals to provide pre-hospital emergency medical care to patients of all ages. Includes knowledge about the acute, critical differences in physiology, pathophysiology, or clinical symptoms so that appropriate emergency assessment and treatment can be provided and the necessary information communicated to a responsible physician.

17.0207 *Medical Radiation Dosimetry.* An instructional program that prepares individuals to calculate radiation dosage in the treatment of malignant disease and plan the direction of radiation to its target in the safest way.

17.0208 *Nuclear Medical Technology.* An instructional program that prepares individuals to prepare and administer radioactive isotopes and to measure glandular and other bodily activity in therapeutic, diagnostic, and tracer studies, using a variety of equipment.

17.0209 *Radiograph Medical Technology.* An instructional program that prepares individuals to apply roentgen rays and radioactive substances to patients for diagnostic and therapeutic purposes, under the supervision of a radiologist. Includes instruction in anatomy, physiology, radiographic techniques, radiation protection, equipment maintenance, and film processing and darkroom techniques.

17.0210 *Respiratory Therapy Technology.* An instructional program that prepares individuals to operate and maintain equipment used in supportive respiratory functions (including the administration of oxygen and other therapeutic gases and mist inhalations) as directed by a physician, to respond to emergency situations and to provide treatment to patients with severe respiratory disorders which require intensive care. Includes instruction in making minor repairs.

17.0211 *Surgical Technology.* An instructional program that prepares individuals to serve as general technical assistants before, during, and after operations. Includes instruction in pre-operation patient and surgical team preparation, supply inventory maintenance, and sterilization and cleaning of equipment and operating rooms.

17.0212 *Ultrasound Technology.* An instructional program that prepares individuals to use acoustic energy for diagnosis, research, and therapy; operate ultrasound equipment to obtain diagnostic results; evaluate results for quality of technique; and in emergency situations, make interim reports to medical staff.

17.0299 *Diagnostic and Treatment Services, Other.* Any instructional program in diagnostic and treatment services not described above.

17.03 ***Medical Laboratory Technologies.*** A group of instructional programs that prepare individuals to carry out technical functions to obtain data for use in diagnosis, treatment, and control of diseases, under the supervision of medical specialists. Includes instruction in the use of technical equipment and the administration of medical and/or chemical agents.

17.0301 *Blood Bank Technology.* An instructional program that prepares individuals to work under the direction of a pathologist, physician, or laboratory director prepared to collect, classify, store, and process blood; including separation of components from whole blood; detection and identification of antibodies in patient and donor bloods; and selection and delivery of suitable blood for transfusion.

17.0302 *Chemistry Technology.* An instructional program that prepares individuals to work under the supervision of a pathologist, physician, or qualified scientist in performing qualitative and quantitative chemical analyses of body fluids and exudates, utilizing quantitative equipment and a wide range of laboratory instruments, to provide information for diagnosing and treating disease.

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17.0303 *Clinical Animal Technology.* An instructional program that prepares individuals to provide care and treatment to laboratory animals in hospitals, veterinary clinics, and research laboratories; and to perform tests and procedures used in research and diagnosis, as prescribed and supervised by pathologists or other qualified research scientists.

17.0304 *Clinical Laboratory Aide.* An instructional program that prepares individuals to perform simple tasks involved in maintaining cleanliness and order in the clinical laboratory. Includes instruction in sterilization of equipment, maintaining supplies, messenger service, and related duties.

17.0305 *Clinical Laboratory Assisting.* An instructional program that prepares individuals to perform routine clinical laboratory procedures under the supervision of medical laboratory technicians, pathologists, or other physicians.

17.0306 *Cytotechnology.* An instructional program that prepares individuals to stain, mount, and screen slides of cells of the human body for determination of abnormalities such as exfoliated cells, under the supervision of a doctor.

17.0307 *Hematology Technology.* An instructional program that prepares individuals to work in a hospital setting under the supervision of a hematologist or laboratory director, in performing quantitative, qualitative, and coagulation tests on cellular and plasma components of blood for use in the diagnosis and treatment of disease.

17.0308 *Histologic Technology.* An instructional program that prepares individuals to prepare, section, and stain tissue for microscopic study by a pathologist or other clinical scientist.

17.0309 *Medical Laborabory Technology.* An instructional program that prepares individuals to perform bacteriological, biological, and chemical tests to provide data for diagnosis and treatment of disease, under the supervision of pathologists.

17.0310 *Medical Technology.* An instructional program that prepares individuals as a highly skilled laboratory scientist with a strong generalist orientation and an ability to perform complex and specialized procedures in all major areas of the clinical laboratory. The medical technologist is responsible for complex analysis requiring the exercise of individual judgment and must be able to relate findings to the presence or absence of disease. May supervise and/or teach laboratory personnel.

17.0311 *Microbiology Technology.* An instructional program that prepares individuals to work with a minimum of supervision by a pathologist, physician, or laboratory director, in performing bacteriological, viral, parasitological, immunologic, and serologic procedures in a clinical laboratory setting.

17.0399 *Medical Laboratory Technologies, Other.* Any instructional program in medical laboratory technologies not described above.

17.04 ***Mental Health/Human Services.*** A group of instructional programs that prepare individuals to assist nursing and mental health personnel in the care and treatment of the mentally ill, aged, drug addicted, and physically handicapped. Includes instruction in new patterns of living and administering prescribed medication.

17.0401 *Alcohol/Drug Abuse Specialty.* An instructional program that prepares individuals to advise and assist people in their efforts to overcome personal, family, and social problems that are manifested in alcoholism and drug addiction.

17.0402 *Community Health Work.* An instructional program that prepares individuals to serve as liaison between professional health workers and the recipients of health services in the community. Includes instruction in the basic understanding of biology, communicable diseases, environmental health, personal hygiene, care of infants, medications, and family and community services.

17.0403 *Genetic Counseling.* An instructional program that prepares individuals to counsel clients as to the origin, transmission, and development of hereditary characteristics and their relations to birth abnormalities.

17.0404 *Home Health Aide.* An instructional program that prepares individuals to assist elderly, convalescent, or handicapped patients in their homes by providing for physical, mental, emotional, and/or social health-care needs, under the supervision of a registered nurse or physician.

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- - - - - - - *Medical Social Work.* (see 44.0702).

17.0405 *Mental Health/Human Services Assisting.* An instructional program that prepares individuals to perform routine tasks related to the care, treatment, and rehabilitative activities for the aged, chemically dependent, mentally ill, or mentally handicapped, as supervised by a physician in a hospital or mental health clinic.

17.0406 *Mental Health/Human Services Technology.* An instructional program that prepares individuals to provide and/or assist in treatment, care, and rehabilitative activities for clients who are aged, mentally ill, mentally or physically handicapped, or chemically dependent, under the supervision of a physician. Includes instruction in new patterns of living and administering medications.

17.0407 *Rehabilitation Counseling.* An instructional program that prepares individuals to help disabled individuals become aware of and secure rehabilitation services designed to fit the disabled person for gainful employment, assist in job placement, and check on job satisfaction after employment.

17.0408 *Therapeutic Child Care Work.* An instructional program that prepares individuals under supervision, to implement activity and training programs which provide a preventive and therapeutic environment for mentally ill and emotionally disturbed children and adolescents. Trains children in self-help skills through intensive group sessions involving structured daily activities and reinforcement of other therapeutic experiences; records, evaluates, and reports progress of patients.

17.0499 *Mental Health/Human Services, Other.* Any instructional program in mental health/human services not described above.

17.05 ***Miscellaneous Allied Health Services.*** A group of instructional programs that prepare individuals to assist specialists in the health field in providing support functions in such areas as pharmaceuticals, central supply, medical records, and the admissions/discharge of patients.

17.0501 *Animal Technology.* An instructional program that prepares individuals to assist the veterinarian, biological researcher, or other scientist in the care and management of animals. Includes instruction in the basic principles of normal and abnormal life processes, and in routine laboratory and animal health care procedures.

17.0502 *Central Supply Technology.* An instructional program that prepares individuals to adjust, clean, sterilize, and assemble hospital equipment, supplies, and instruments according to prescribed procedures and techniques. Includes instruction in inspection, evaluation, and purchasing of equipment and materials and in the distribution and inventory of equipment supplies.

17.0503 *Medical Assisting.* An instructional program that prepares individuals to assist a physician by performing functions related to both business administration and clinical duties of a medical office. Business aspects of instruction cover insurance, accounts, reports, medical records, and medical transcription. Clinical aspects of study include preparation of the patient for examination, assessing vital signs, assisting with examination and treatment, routine laboratory procedures, and use of the electrocardiograph machine.

17.0504 *Medical Illustrating.* An instructional program that prepares individuals to demonstrate medical facts by the creation of illustrations, models, and teaching films; serves as a consultant, advisor, and administrator in the field of medical illustration.

17.0505 *Medical Office Management.* An instructional program that prepares individuals to manage the administrative and business aspects of a solo or group medical practice.

17.0506 *Medical Records Technology.* An instructional program that prepares individuals to develop statistical reports, code diseases and operations, and maintain indexes according to accepted procedures; take records to court; handle requests for medical information; record minutes of medical staff committee meetings; and supervise filing areas and activities of medical records clerks.

17.0507 *Pharmacy Assisting.* An instructional program that prepares individuals to assist the pharmacist in performing routine duties related to maintaining and dispensing pharmaceutical supplies and medications, under supervision of a registered pharmacist.

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17.0508 *Physician Assisting-Primary Care.* An instructional program that prepares individuals to perform physician-delegated functions in the areas of general practice, including family medicine, internal medicine, obstetrics, and emergency medicine.

17.0509 *Physician Assisting-Specialty.* An instructional program that prepares individuals to perform functions delegated by a clinical specialist in specific areas of patient care; urology, surgery, pathology, orthopaedics, pediatrics, etc.

17.0510 *Podiatric Assisting.* An instructional programs that prepares individuals to support the podiatrist in servicing patients by preparing them for treatment, sterilizing the instruments, performing general office duties, and assisting the podiatrist in preparing dressings, administering treatments, and developing x-rays.

17.0511 *Veterinarian Aide.* An instructional program that prepares individuals to assist veterinarians in their treatment of animals by preparing animals for treatment, performing general office duties, preparing treatment rooms and maintaining inventories of equipment and supplies, and performing other duties under the supervision of the veterinarian.

17.0512 *Veterinarian Assisting.* An instructional program that prepares individuals to assist a veterinary doctor in providing care and treatment to animals in a veterinary hospital or clinic. Includes instruction in preparing the animal for examination, assessing vital signs, assisting with examination and treatment, sterilizing equipment, performing routine laboratory procedures, and giving injections and other medications. Also includes maintaining medical and business records, and charting and scheduling activities.

17.0513 *Ward Clerk.* An instructional program that prepares individuals to perform such duties as answering the telephone, relaying messages, receiving and directing visitors, transcribing orders, and preparing requisition forms in the nursing unit of a hospital or other health care facility, under the supervision of a head nurse.

17.0599 *Miscellaneous Allied Health Services, Other.* Any instructional program in miscellaneous allied health services not described above.

17.06 *Nursing-Related Services.* A group of instructional programs that prepare individuals to work under the supervision of a physician, nurse supervisor, or other qualified nursing staff member in providing nursing care to patients in hospitals, sanitariums, clinics, private homes, or other places by administering medications and treatments, assisting during treatment and examination of patients, or performing related auxiliary services.

17.0601 *Geriatric Aide.* An instructional program that prepares individuals to perform tasks involved in providing nursing and personal care to elderly patients under the supervision of qualified nursing staff members. Emphasis is on the maintenance of daily living activities of these patients.

17.0602 *Nursing Assisting.* An instructional program that prepares individuals to perform routine tasks under the supervision of a registered or licensed practical nurse, in the provision of personal care to individuals who are receiving nursing care.

17.0603 *Obstetrical Technology.* An instructional program that prepares individuals to assist in the care of mothers in labor and delivery rooms before, during, and after delivery under the supervision of professional personnel. Includes instruction in hygienic procedures, routine laboratory work, and sterilization of equipment and supplies.

17.0604 *Pediatric Aide.* An instructional program that prepares individuals to provide nursing care to ill or handicapped children (newborns, infants, children, and adolescents) in hospitals and other health-care facilities, under the supervision of qualified nursing staff members.

17.0605 *Practical Nursing.* An instructional program that prepares individual to assist in providing general nursing care under the direction of a registered nurse, physician, or dentist.

17.0606 *Ward Service Management.* An instructional program that prepares individuals to supervise and coordinate administrative management functions for one or more patient care units in a health-care facility, under the supervision of a nursing service director or administrator.

17.0699 *Nursing-Related Services, Other.* Any instructional program in nursing-related services not described above.

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17.07 ***Ophthalmic Services.*** A group of instructional programs that prepare individuals to assist an ophthalmologist or optometrist in identifying vision defects, performing tests, administering treatment preliminary to examination or surgery, preparing and fitting eyeglasses or contact lenses, and directing corrective eye exercises.

17.0701 *Ophthalmic Dispensing.* An instructional program that prepares individuals to adapt and fit corrective eyewear as prescribed by the ophthalmologist or optometrist.

17.0702 *Ophthalmic Laboratory Technology.* An instructional program that prepares individuals to operate machines, to grind lenses, and fabricate eyewear to prescription.

17.0703 *Ophthalmic Medical Assisting.* An instructional program tht prepares individuals to assist the ophthalmologist in eye examinations and in the treatment of eye diseases and disorders.

17.0704 *Optometric Assisting.* An instructional program that prepares individuals to assist in performing tests to determine defects in vision, preparing and fitting eyeglasses or contact lenses, and administering corrective eye exercises and other treatments which do not require drugs or surgery.

17.0705 *Optometric Technology.* An instructional program that prepares individuals to perform a variety of vision care procedures or to specialize in a particular area of vision care, such as fitting of contact lenses or visual training, under the supervision of a physician or optometrist.

17.0706 *Orthoptics.* An instructional program that prepares individuals to teach patients with correctable focusing defects to develop and use binocular vision, under the supervision of an opthamologist.

17.0799 *Ophthalmic Services, Other.* Any instructional program in ophthalmic services not described above.

17.08 ***Rehabilitation Services.*** A group of instructional programs that prepare individuals to work under the direction of a physician or other appropriate specialist in assisting handicapped persons to overcome or compensate for any loss of function and in restoring the individual's physical health.

17.0801 *Art Therapy.* An instructional program that prepares individuals to apply the principles and techniques of art to the rehabilitation of physically and mentally ill patients.

17.0802 *Corrective Therapy.* An instructional program that prepares individuals to provide medically prescribed programs of therapeutic exercise to physically and mentally ill patients to prevent muscular deconditioning resulting from inactivity and to attain resocialization and specific psychiatric objectives.

17.0803 *Dance Therapy.* An instructional program that prepares individuals to appy the principles and techniques of dance to the rehabilitation of physically and mentally ill patients.

17.0804 *Exercise Physiology.* An instructional program that prepares individuals to work with clinicians in hospitals with rehabilitation programs to provide exercise stress testing and cardiovascular rehabilitation for patients.

17.0805 *Manual Arts Therapy.* An instructional program that prepares individuals to use industrial arts, workshops, and agricultural activities to assist in the rehabilitation of patients.

17.0806 *Music Therapy.* An instructional program that prepares individuals to use individual and group musical activities with physically and mentally ill patients to accomplish therapeutic aims, to create an environment conducive to treatment, or to influence behavior.

17.0807 *Occupational Therapy.* An instructional program that prepares individuals to use the principles and techniques of providing therapy that offers mental diversion for the patient, frequently serves to exercise an affected part of the body, and gives vocational training that would enable them to enter the work force.

17.0808 *Occupational Therapy Assisting.* An instructional program that prepares individuals to assist an occupational therapist in implementing the plan of therapy for a patient prescribed by a physician.

17.0809 *Occupational Therapy Aide.* An instructional program that prepares individuals to prepare, collect, and distribute supplies and equipment; keep records; make requisitions; and assist individual patients as directed by the occupational therapist in an occupational therapy unit.

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17.0810 *Orthotic/Prosthetic Assisting.* An instructional program that prepares individuals to assist the orthotist/prosthetist in caring for patients by making casts, measurements, and model specifications, and fitting supportive appliances and/or artificial limbs.

17.0811 *Orthotics/Prosthetics.* An instructional program that prepares individuals to write specifications for, make, fit, and repair braces and appliances and/or artificial limbs following the prescription of physicians.

17.0812 *Orthopedic Assisting.* An instructional program that prepares individuals to assist a physician by applying, adjusting, and removing casts; assembling traction apparatus; fitting strappings and splints for orthopedic patients; assembling exercise frames; and adjusting crutches and canes to fit patients. Training may include instructing patients with casts, braces, and crutches in walking and in care of the devices.

17.0813 *Physical Therapy.* An instructional program that prepares individuals to use the principles and techniques of treating disease, bodily weakness, or physical defects by physical remedies, including massage and gymnastics.

17.0814 *Physical Therapy Aide.* An instructional program that prepares individuals to assist a physical therapist by cleaning and setting up equipment, assisting in lifting and moving patients, maintaining cleanliness and order in the treatment areas, ordering and storing supplies, keeping records, and escorting patients between nursing units and therapy units.

17.0815 *Physical Therapy Assisting.* An instructional program that prepares individuals to assist a physical therapist in implementing the plan of therapy for a patient prescribed by a physician.

17.0816 *Recreational Therapy.* An instructional program that prepares individuals to plan, organize, and direct medically approved recreation programs such as sports, trips, dramatics, arts and crafts, either to help clients in recovery from illness or in coping with temporary or permanent disability.

17.0817 *Recreational Therapy Technology.* An instructional program that prepares individuals to assist the recreational therapist in conducting medically approved recreation programs such as sports, trips, dramatics, and arts and crafts.

17.0818 *Respiratory Therapy.* An instructional program that prepares individuals to administer respiratory care under the direction of a physician, evaluating the patient's progress, and making recommendations for respiratory therapy. Includes instruction in ventilatory therapy, cardio-respiratory rehabilitation, micro-environmental control, and diagnostic testing of the respiratory system (inhalation therapist).

17.0819 *Respiratory Therapy Assisting.* An instructional program that prepares individuals to assist a respiratory therapist in implementing the plan of therapy for a patient prescribed by a physician.

17.0820 *Speech/Hearing Therapy Aide.* An instructional program that prepares individuals to assist in testing, evaluating, and treating the problems of people with speech and hearing difficulties.

17.0821 *Speech-Language Pathology/Audiology.* An instructional program that prepares individuals to evaluate and habilitate hearing, speech, and language disorders, such as neurological disturbances, defective articulation or foreign dialect in children or adults. Includes instruction in how to plan, direct, and conduct remedial programs designed to restore or improve communication efficiency of individuals with hearing or speech impairment.

------- *Therapeutic Recreation Aide* (see 20.0607).

17.0899 *Rehabilitation Services, Other.* An instructional program in rehabilitation services not described above.

17.99 ***Allied Health, Other.*** A group of instructional programs in allied health not described above.

17.9999 *Allied Health, Other.* Any instructional program in allied health not described above.

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18. Health Sciences. A summary of groups of instructional programs that describe the restoration or preservation of health through the use of drugs, surgical operations, manipulations, or other curative or remedial methods.

18.01 ***Audiology and Speech Pathology.*** A group of instructional programs that describe the therapeutic techniques for treating hearing and speech disorders.

18.0101 *Audiology.* An instructional program that describes the principles and techniques of providing therapy that restores or partially restores impaired hearing.

18.0102 *Speech Pathology.* An instructional program that describes the nature and treatment of hearing and speech disorders.

18.0103 *Speech Pathology/Audiology.* An instructional program that describes the nature and treatment of hearing and speech disorders, including the principles and techniques of providing therapy that restores or partially restores normal functioning.

18.0199 *Audiology and Speech Pathology, Other.* Any instructional program in audiology and speech pathology not described above.

18.02 ***Basic Clinical Health Sciences.*** A group of instructional programs that describe the bodily structures and functions of humans, the principles and techniques of identifying and classifying diseases which affect them, and the foundation of scientific knowledge that is essential to the restoration and preservation of health.

18.0201 *Clinical Anatomy.* An instructional program that describes the structure and parts of the human body, including the bones, tissues, and organs, and their relationship to the restoration and preservation of good health.

18.0202 *Clinical Biochemistry.* An instructional program that describes the nature and chemical composition of the substances that make up the human body, the changes in these substances, and the energy associated with those changes.

18.0203 *Clinical Microbiology.* An instructional program that describes the nature and properties of harmful microorganisms and of the disease processes they induce in humans.

18.0204 *Clinical Pathology.* An instructional program that describes the cause and effect of diseases with emphasis on the structural and functional changes which develop during the disease process, and the systematic methods of detecting these changes.

18.0205 *Physiology.* An instructional program that describes living organisms or their parts, and their relationship to the restoration and preservation of good health.

18.0299 *Basic Clinical Health Sciences, Other.* Any instructional program in basic clinical health sciences not described above.

18.03 ***Chiropractic.*** A group of instructional programs (see 18.0301).

18.0301 *Chiropractic.* An instructional program that describes the principles and techniques for relieving disorders believed due to abnormal function of the nervous system by manipulation and treatment of the structures of the body, especially those of the spinal column.

18.04 ***Dentistry.*** A group of instructional programs that describe the prevention, diagnosis, and treatment of diseases of the teeth and gums and related parts, including the replacement of missing teeth. Includes instruction in the principles and procedures associated with an established, specialized field of dental science.

18.0401 *Dentistry, General.* An instructional program that describes the prevention, diagnosis, and treatment of diseases of the teeth and gums and related parts, including the replacement of missing teeth.

18.0402 *Dental Public Health.* An instructional program that describes the formulation and delivery of public preventive and curative dental health services.

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18.0403 *Endodontics.* An instructional progam that describes the etiology, diagnosis, prevention, and treatment of conditions that affect the dental pulp and other periodontal tissues, including pulp canal therapy and root canal therapy.

18.0404 *Oral/Maxial Facial Surgery.* An instructional program that describes the principles and techniques of performing restorative surgery to the area of the jaws and face and treating diseases, injuries, or deformities of the jaws and associated structures by manual manipulation or by using instruments and appliances.

18.0405 *Oral Pathology.* An instructional program that describes the functional and structural changes and diseases that affect the area of the mouth.

18.0406 *Orthodontics.* An instructional program that describes the principles and techniques involved in the prevention and correction of dental and oral anomalies.

18.0407 *Pedodontics.* An instructional program that describes the principles and techniques of diagnosing and treating the dental and mouth conditions of young children.

18.0408 *Periodontics.* An instructional program that describes the nature and treatment of diseases which affect the mucous membranes and other structures which surround and support the teeth.

18.0409 *Prosthodontics.* An instructional program that describes the principles and techniques of constructing artificial devices, and the restoration and maintenance of oral function by the replacement of missing teeth and other oral structures with such artificial devices.

18.0499 *Dentistry, Other.* Any instructional program in dentistry not described above.

18.05 ***Emergency/Disaster Science.*** A group of instructional programs (see 18.0501).

18.0501 *Emergency/Disaster Science.* An instructional program that describes the methods, procedures, and techniques of providing health care services to persons who need emergency treatment and are not housed in a health care facility.

18.06 ***Epidemiology.*** A group of instructional programs (see 18.0601).

18.0601 *Epidemiology.* An instructional program that describes the nature and treatment of epidemic diseases which affect large numbers of people at the same time, spreading from person to person in localities where it was not prevelant previously.

18.07 ***Health Sciences Administration.*** A group of instructional programs that describe administering some aspect of the health care delivery system.

18.0701 *Health Care Administration.* An instructional program that describes the principles and procedures of planning, organizing, and controlling a hospital or health care facility.

18.0702 *Health Care Planning.* An instructional program that describes the processes involved in the development of alternative ways of achieving the health goals and expectations of society, including the identification of consequences of each alternative for the purpose of guiding decision makers in their deliberations.

18.0703 *Medical Records Administration.* An instructional program that describes the administration of all institutional medical records.

18.0799 *Health Sciences Administration, Other.* Any instructional program in health sciences administration not described above.

18.08 ***Hematology.*** A group of instructional programs (see 18.0801).

18.0801 *Hematology.* An instructional program that describes the nature, functions, and diseases of blood and blood-forming organs and tissues in animals and humans.

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18.09 ***Medical Laboratory.*** A group of instructional programs (see 18.0901).

18.0901 *Medical Laboratory.* An instructional program that describes the principles and practices of clinical laboratory procedures.

18.10 ***Medicine.*** A group of instructional programs that describe the principles and procedures used in the observation, diagnosis, care, and treatment of illness, disease, injury, deformity, or other anomalies in humans. Includes instruction in the principles and procedures associated with an established, specialized field of medicine.

18.1001 *Medicine, General.* An instructional program that describes the principles and procedures used in the observation, diagnosis, care, and treatment of illness, disease, injury, deformity, or other anomalies in humans.

18.1002 *Allergies and Endomology.* An instructional program that describes the diagnosis, care, and treatment of the condition of hypersensitivity of the body to specific substances that results in various types of distressful reactions.

18.1003 *Anesthesiology.* An instructional program that describes the principles and practices of administering substances that produce general or local insensibility to pain and other sensations.

18.1004 *Colon and Rectal Surgery.* An instructional program that describes the principles and techniques of treating diseases, injuries, or deformities of the colon and rectum and adjacent areas by manual manipulation or by using instruments and appliances.

18.1005 *Dermatology.* An instructional program that describes the skin, its structures, functions, diseases, and the treatment of skin diseases.

18.1006 *Emergency Medicine.* An instructional program that describes the methods, procedures, and techniques of providing health care services to persons who need emergency treatment.

18.1007 *Family Practice.* An instructional program that describes the prevention, diagnosis, and treatment of diseases and injuries that commonly occur in the general population.

18.1008 *Geriatrics.* An instructional program that describes the methods, procedures, and techniques of providing health care to the aged, and for their characteristic afflictions.

18.1009 *Immunology.* An instructional program that describes the phenomena of immunity from disease, the production of such immunity in humans, induced sensitivity, and allergy.

18.1010 *Internal Medicine.* An instructional program that describes the principles and procedures involved in the diagnosis and nonsurgical treatment of diseases of the body.

18.1011 *Neurological Surgery.* An instructional program that describes the principles and techniques of treating diseases, injuries, or deformities of the nervous system by manual manipulation or by using instruments and appliances.

18.1012 *Nuclear Medicine.* An instructional program that describes the principles and techniques of medicine that deal with the diagnosis and treatment of illnesses and injuries that are peculiar to atomic energy devices and installations.

18.1013 *Obstetrics and Gynecology.* An instructional program that describes the nature and treatment of diseases of women, especially those affecting the reproductive system and the process of childbirth, and of the care and treatment of women in childbirth and during the period before and after delivery.

18.1014 *Ophthalmology.* An instructional program that describes the anatomy, physiology, diseases and disorders, and care and treatment of the eye.

18.1015 *Orthodontic Surgery.* An instructional program that describes the principles and techniques involved in the prevention and correction of dental and oral anomalies by surgical procedures.

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18.1016 *Orthopedic.* An instructional program that describes the principles and techniques of correcting or curing deformities and diseases of the spine, bones, joints, muscles, or other parts of the skeletal system.

18.1017 *Otorhinolaryngology/Otolaryngology.* An instructional program that describes the anatomy, physiology, disorders, diseases, and care and treatment of the ear, the nose, and the throat.

18.1018 *Pathology.* An instructional program that describes the principles and techniques involved in diagnosing, from body tissue, fluids, secretions, and other specimens, the presence and stage of a disease.

18.1019 *Pediatrics.* An instructional program that describes the principles and techniques associated with the medical and hygienic care of children and of the diagnosis and treatment of children's diseases.

18.1020 *Physical Medicine and Rehabilitation.* An instructional program that describes the principles and techniques of medicine which deal with the diagnosis, treatment, and prevention of disease with the aid of physical agents, such as light, heat, cold, water, and electricity, or with mechanical apparatus.

18.1021 *Plastic Surgery.* An instructional program that describes the principles and techniques of repairing or replacing malformed, injured, or lost organs or tissues using surgical methods.

18.1022 *Preventive Medicine.* An instructional program that describes the principles and techniques of medicine which deal with the promotion of physical and mental health, the prevention of disease, and the prolongation of life, as oposed to the mere treatment of existing disease.

18.1023 *Psychiatry.* An instructional program that describes the diagnosis, treatment, and prevention of disorders of the mind.

18.1024 *Neurology.* An instructional program that describes the structure, function, disorders, diseases, and care and treatment of the nervous system.

18.1025 *Radiology.* An instructional program that describes the principles and techniques of using roentgen rays and radioactive substances for diagnostic and therapeutic purposes.

18.1026 *Surgery.* An instructional program that describes the principles and techniques of treating diseases, injuries, or deformities by manual operation and manipulation or by using instruments and appliances.

18.1027 *Thoracic Surgery.* An instructional program that describes the principles and techniques of treating diseases, injuries, or deformities of the region of the chest by manual manipulation or by using instruments and appliances.

18.1028 *Urology.* An instructional program that describes the anatomy, physiology, disorders, diseases, and care and treatment of the genitourinary tract.

18.1099 *Medicine, Other.* Any instructional program in medicine not described above.

18.11 *Nursing.* A group of instructional programs that describe the techniques and procedures for providing care for sick, disabled, infirm, or other individuals, including the administering of medications and treatments, assisting a physician during treatments and examinations, and planning education for health maintenance.

18.1101 *Nursing, General.* An instructional program that generally describes the techniques and procedures for providing care for sick, disabled, infirm, or other individuals, including the administration of medication and treatments, assisting a physician during treatments and examinations, and planning education for health maintenance.

18.1102 *Anesthetist.* An instructional program that describes the techniques and procedures for administering anesthetics.

18.1103 *Maternal/Child Health.* An instructional program that describes the techniques and procedures for providing pre-natal care to pregnant women and post-natal care to new mothers and their infants.

18.1104 *Medical Surgical.* An instructional program that describes the techniques and procedures for providing care to patients in clinical and surgical settings.

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18.1105 *Nursing Administration.* An instructional program that describes the techniques and procedures for managing nursing personnel and services in health care delivery agencies.

18.1106 *Psychiatric/Mental Health.* An instructional program that describes the techniques and procedures for providing care to mentally ill patients.

18.1107 *Public Health.* An instructional program that describes the techniques and procedures for providing preventive and curative nursing services.

18.1199 *Nursing, Other.* Any instructional program in nursing not described above.

18.12 ***Optometry.*** A group of instructional programs (see 18.1201).

18.1201 *Optometry.* An instructional program that describes the principles and techniques for testing, determining defects, and prescribing corrective means for decreasing deficiencies in an individual's vision.

18.13 ***Osteopathic Medicine.*** A group of instructional programs (see 18.1301).

18.1301 *Osteopathic Medicine.* An instructional program that describes the system of therapy utilizing accepted physical, medical, and surgical methods, of diagnosis and therapy, and emphasizing the importance of normal body mechanics and manipulation methods of detecting and correcting faulty body structure.

18.14 ***Pharmacy.*** A group of instructional programs (see 18.1401).

18.1401 *Pharmacy.* An instructional program that describes the principles and procedures of procuring, preparing, compounding, recommending, administering, and dispensing drugs, medicines, and devices used in the diagnosis, treatment, or prevention of disease.

18.15 ***Podiatry.*** A group of instructional programs (see 18.1501).

18.1501 *Podiatry.* An instructional program that describes the anatomy, physiology, disorders, diseases, and care and treatment of the feet.

18.16 ***Population and Family Planning.*** A group of instructional programs (see 18.1601).

18.1601 *Population and Family Planning.* An instructional program that describes the principles and procedures involved in controlling population and family size and approximate birth dates of children by the appropriate use of contraceptive techniques.

18.17 ***Pre-Dentistry.*** A group of instructional programs (see 18.1701).

18.1701 *Pre-Dentistry.* An instructional program that prepares individuals with the express purpose for entering into a program in dentistry.

18.18 ***Pre-Medicine.*** A group of instructional programs (see 18.1801).

18.1801 *Pre-Medicine.* An instructional program that prepares individuals with the express purpose for entering into a program in medicine.

18.19 ***Pre-Pharmacy.*** A group of instructional programs (see 18.1901).

18.1901 *Pre-Pharmacy.* An instructional program that prepares individuals with the express purpose for entering into a program in pharmacy.

18.20 ***Pre-Veterinary.*** A group of instructional programs (see 18.2001).

18.2001 *Pre-Veterinary.* An instructional program that prepares individuals with the express purpose for entering into a program in veterinary medicine.

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18.21 ***Prosectorial Science.*** A group of instructional programs (see 18.2101).

18.2101 *Prosectorial Science.* An instructional program that describes the principles and techniques involved in making dissections for anatomic demonstrations.

18.22 ***Public Health Laboratory Science.*** A group of instructional programs (see 18.2201).

18.2201 *Public Health Laboratory Science.* An instructional program that describes the principles and practices of public health laboratory procedures.

18.23 ***Toxicology (Clinical).*** A group of instructional programs (see 18.2301).

18.2301 *Toxicology (Clinical).* An instructional program that describes the nature and extent of the injurious response to the ingestion of chemical compounds and the determination of safe levels of exposure of ingestion in man and other species.

18.24 ***Veterinary Medicine.*** A group of instructional programs (see 18.2401).

18.2401 *Veterinary Medicine.* An instructional program that describes the nature, prevention, and treatment of animal diseases and the medical and surgical treatment of animals.

18.99 ***Health Sciences, Other.*** A group of instructional programs in health sciences not described above.

18.9999 *Health Sciences, Other.* Any instructional program in health sciences not described above.

19. Home Economics. A summary of groups of instructional programs that describe the relationship between the physical, social, emotional, and intellectual environment in and of the home and family, and the development of individuals. Includes instruction in the natural and social sciences and humanities in the development of attitudes, knowledge, and ability pertaining to clothing and textiles, consumer education, food and nutrition, home management, housing, human development and family studies, and institutional management.

19.01 ***Home Economics, General.*** A group of instructional programs (see 19.0101).

19.0101 *Home Economics, General.* An instructional program that generally describes the understanding of the relationship between the physical, social, emotional, and intellectual environment in and of the home and family, and the development of individuals.

19.02 ***Business Home Economics.*** A group of instructional programs (see 19.0201).

19.0201 *Business Home Economics.* An instructional program that describes the relationship between human and material resources, such as time, energy, money, talent, and management of the home.

19.03 ***Family and Community Services.*** A group of instructional programs that describe the cultural, social, and technological influences on the family in changing societies, including family programs and support services that are available.

19.0301 *Family and Community Services, General.* An instructional program that generally describes the cultural, social, and technological influences on the family in changing societies, including family programs and support services that are available.

19.0302 *Nonformal Education (Extension, Adult/Extended).* An instructional program that describes educational principles and home economics content in designing, conducting, and evaluating instructional programs in such nonformal settings as extension and community agencies.

19.0303 *Family Services.* An instructional program that describes how to utilize home economics perspectives in family service agencies within government, public, and private sectors.

19.0399 *Family and Community Services, Other.* Any instructional program in family and community services not described above.

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19.04 ***Family/Consumer Resource Management.*** A group of instructional programs that describe the concepts, skills, and processes through which decisions about the use of resources are directed toward goal achievement in home and family living; also involved is an understanding of goal formulation and of management functions and processes through which the household and financial activities of individuals and families are accomplished.

19.0401 *Family/Consumer Resource Management, General.* An instructional program that generally describes the concepts, skills, and processes through which decisions about the use of resources are directed toward goal achievement in home and family living; also involved is an understanding of goal formulation and of management functions and processes through which the household and financial activities of the individuals and families are accomplished.

19.0402 *Consumer Science.* An instructional program that describes the attitudes, concepts, skills, and understandings of consumers which contribute to their satisfaction in their choice and utilization of goods and services.

19.0403 *Family Economics.* An instructional program that describes the income and distribution patterns that meet individual and family needs and wants, together with the means of achieving financial security.

------- *Home Management.* (See 20.0109).

19.0499 *Family/Consumer Resource Management, Other.* Any instructional program in family/consumer resource management not described above.

19.05 ***Food Sciences and Human Nutrition.*** A group of instructional programs that describe the role of food and nutrition in personal and family living, and in commercial and institutional food services, with emphasis being placed on food handling techniques, purchase and storage of food, planning, preparing, and serving meals to meet the needs of individuals and families.

19.0501 *Food Sciences and Human Nutrition, General.* An instructional program that generally describes the role of food and nutrition in personal and family living, and in commercial and institutional food services, with emphasis being placed on food handling techniques, purchase and storage of food, planning, preparing, and serving meals to meet the needs of individuals and families.

19.0502 *Food/Food Sciences.* An instructional program that describes food properties during processing, storage, marketing, and use.

19.0503 *Dietetics/Human Nutritional Services.* An instructional program that describes the translation of the science of nutrition into practical solutions for the dietary needs of people and the preparation of professionals to deal with the role of nutrition in human health and the vitality of individuals.

19.0504 *Human Nutrition.* An instructional program that describes the physical and biological sciences as applied to human nutrition.

19.0599 *Food Sciences and Human Nutrition, Other.* Any instructional program in food sciences and human nutrition not described above.

------ *Home Economics Education.* (See 13.1308).

19.06 ***Human Environment and Housing.*** A group of instructional programs that describe the psychosocioeconomic and aesthetic aspects of the selection of housing, home furnishings, household equipment, interior design, and of the maintenance and repair of the home.

19.0601 *Human Environment and Housing, General.* An instructional program that generally describes the psychosocioeconomic and aesthetic aspects of the selection of housing, home furnishings, household equipment, interior design, and of the maintenance and repair of the home.

19.0602 *Household Equipment.* An instructional program that describes the purpose, selection, care, use, and maintenance of equipment used in the home.

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19.0603 *Housing.* An instructional program that describes how housing designs can meet the needs of individuals, families, and society. Fundamental interactions between human development and behavior and the environment are emphasized.

------- *Interior Design.* (See 04.0501).

19.0699 *Human Environment and Housing, Other.* Any instructional program in human environment and housing not described above.

19.07 ***Individual and Family Development.*** A group of intructional programs that describe the basic development and behavioral characteristics of the individual within the context of the family from conception through death.

19.0701 *Individual and Family Development, General.* An instructional program that generally describes the basic developmental and behavioral characteristics of the individual within the context of the family from conception through death.

19.0702 *Adult Development.* An instructional program that describes the self-development and actualization of individuals through the family, including physiological and psychological aspects of human sexuality, personal hygiene, grooming, value development, interpersonal relationships, and patterns of adult living.

------- *Child Development, Care, and Guidance.* (See 20.0102).

19.0703 *Family Counseling.* An instructional program that describes the factors affecting marital relationships, parent-child relationships, and the functioning of the family as a whole, including economic problems, separation and divorce, death, exceptional children, and illness.

19.0704 *Family Relations.* An instructional program that describes the family throughout the life cycle with emphasis on family structures, functions, interactions, and roles of family members.

19.0705 *Geriatric Services.* An instructional program that describes the characteristics, attitudes, and behavior of older people in family settings, including physical, social, economic, and psychological needs and concerns; related legislation; and community resources.

19.0799 *Individual and Family Development, Other.* Any instructional program in individual and family development not described above.

19.08 ***International/Comparative Home Economics.*** A group of instructional programs (see 19.0801).

19.0801 *International/Comparative Home Economics.* An instructional program that describes how to integrate understanding of other cultures and home economics content for the purpose of designing, providing, and evaluating home economics programs in international settings.

19.09 ***Textiles and Clothing.*** A group of instructional programs that describe the ways of meeting psychological, sociological, economic and physiological needs for clothing and textiles, including techniques of production, distribution, marketing, consumption, refurbishing, and relevant legislation.

19.0901 *Textiles and Clothing, General.* An instructional program that generally describes the ways of meeting psychological, sociological, economic, and physiological needs for clothing and textiles, including techniques of production, distribution, marketing, consumption, refurbishing, and relevant legislation.

19.0902 *Fashion Design.* An instructional program that describes the creative combination of line, form, and fabric in the production of garments and accessories for the high fashion field.

19.0903 *Textiles and Clothing, Retail.* An instructional program that describes the dynamic interaction within the distribution system of clothing, home furnishings, and textiles as products move to consumers.

19.0904 *Textile Science.* An instructional program that describes the design, production, fibers and finishes of textiles.

19.0999 *Textiles and Clothing, Other.* Any instructional program in textiles and clothing not described above.

19.99 ***Home Economics, Other.*** A group of instructional programs in home economics not described above.

19.9999 *Home Economics, Other.* Any instructional program in home economics not described above.

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20. **Vocational Home Economics.** A summary of groups of instructional programs that emphasize the acquisition of competencies (including skills and job attitudes) needed for securing and holding paid employment at the entry and advanced levels, and/or preparing for advancement in occupations utilizing home economics education knowledge and skills. Vocational home economics education instructional programs are developed from home economics education subject matter areas to meet the unique requirements of the specific vocations. Programs that prepare individuals for paid employment include: (1) services to individuals/ families; (2) assistance to professional home economists and professionals in fields related to home economics in industry, business, and public and private agencies; and (3) other services and/or assistance directly related to one or more of the home economics subject matter areas, offered in formal and/or informal settings combined with supervised laboratory and work experiences.

20.01 ***Consumer and Homemaking Home Economics.*** A group of instructional programs that prepare individuals at all educational levels for the occupation of homemaking, emphasizing the acquisition of knowledge and the development of understanding attitudes, standards, values, and skills relevant to individual and family life, Includes instruction in consumer education, food and nutrition, family living and parenthood education, child growth and development, housing and home management (including resource management), and clothing and textiles; that emphasize the improvement of the home, the quality of individual and family life, and enhance potential employability. These programs prepare individuals for the multiple roles of homemaker and wage earner.

20.0101 *Comprehensive Consumer and Homemaking Home Economics.* An instructional program that prepares individuals for the occupation of homemaker. Includes instruction in all home economics subject matter areas concerned with the economics, social and cultural conditions, needs of individuals and families, and emphasizes the basic principles and interrelationships among these areas.

20.0102 *Child Development, Care, and Guidance.* An instructional program that prepares individuals to understand children's physical, mental, emotional, and social growth and development, as well as their care and guidance. The program draws on aspects of the social and biological sciences of which home economics is a component. Observation and actual experiences with children and their parents are integral parts of the program.

20.0103 *Clothing and Textiles.* An instructional program that prepares individuals to understand the social, psychological, and physiological aspects of clothing and textiles; the nature, acquisition, and use of clothing and textile products; the selection, construction, maintenance, and alteration of clothing and textile products; and the effect of consumer choices on the individual and family as well as the clothing and textile industry.

20.0104 *Consumer Education.* An instructional program that prepares individuals to understand the values, needs, wants, goals, and resources that enable youth and adults to make rational decisions that contribute to family stability and quality of life. Includes instruction in budgeting and spending plans, use of credit, savings, investments, taxes, consumer buying, and consumer rights and responsibilities.

20.0105 *Exploratory Homemaking.* An instructional program that provides individuals in elementary, middle, and junior high school the opportunity to explore home economics subject matter areas. Includes instruction in the development of positive self-concepts; understanding personal growth and development; and relationships with peers and family members in becoming contributing members in the home, school, and community.

20.0106 *Family/Individual Health.* An instructional program that prepares individuals to understand the related aspects of health in family living with special emphasis on nutrition, emotional health, and physical health; the relationship of the health of an individual to the well-being of the family; the prevention of illness; and the basic care of the ill and convalescent in the home, including the elderly, the young child, and the handicapped.

20.0107 *Family Living and Parenthood.* An instructional program that prepares individuals to understand the nature, function, and significance of human relationships within the family/individual units. Includes instruction in the concepts and principles related to various family living conditions; the establishment and maintenance of relationships; and the preparation for marriage, parenthood, and family life. Instruction emphasizes the uniqueness of families and individuals, the development and socialization of the individuals, and meeting the needs and interests of individuals and family members

20.0108 *Food and Nutrition.* An instructional program that prepares individuals to understand the principles of nutrition; the relationship of nutrition to health and well-being; the selection, preparation, and care of food; meal management to meet individual and family food needs and patterns of living; good economics and ecology; and optimal use of the food dollar.

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20.0109 *Home Management.* An instructional program that prepares individuals to understand the establishment and maintenance of a satisfying home and family life, including decisionmaking regarding human and nonhuman resources. Includes instruction in the societal and economic influences on individual and family management; values, goals, and standards; family economics; and the organization of activities in the home as a means of successfully combining the roles of homemaker and wage earner.

20.0110 *Housing, Home Furnishing and Equipment.* An instructional program that prepares individuals to understand the physical, psychological, and social influences pertaining to complex housing decisions required for creating a desirable living environment. Includes instruction in the human and environmental factors influencing the form and use of housing; the varied types of housing; costs; exterior and interior design; home furnishings and equipment; and the selection, use, and care of available resources for achieving improved living space to meet individual and family needs.

20.0199 *Consumer and Homemaking Home Economics, Other.* Any instructional program in consumer and homemaking home economics not described above.

20.02 ***Child Care and Guidance Management and Services.*** A group of instructional programs that prepare individuals for occupations in child care and guidance, foster care/family day care, and teacher assistance, often under the supervision of professional personnel. Includes instruction in child growth and development; nutrition; program planning and management; safety and behavior guidance; recreational and play activities; child abuse and neglect; parent-child personal relationships; learning experiences for children; interpersonal relationships; and laws, regulations, and policies relating to child-care services and maintenance of children's environments.

20.0201 *Child Care and Guidance Management and Services, General.* An instructional program that generally prepares individuals for occupations in child care and guidance, foster care/family day care, and teacher assistance, often under the supervision of professional personnel. Includes instruction in child growth and development; nutrition; program planning and management; safety and behavior guidance; recreational and play activities; child abuse and neglect; parent-child personal relationships; learning experiences for children; interpersonal relationships; and laws, regulations, and policies relating to child-care services and maintenance of children's environments.

20.0202 *Child Care Aide/Assisting.* An instructional program that prepares individuals to assist with the care and guidance of infants and young children under the supervision of professional personnel. Includes instruction in planning, organizing, and conducting activities which promote physical, interpersonal, motor, mental, and social growth and development of acceptable behavior, cleanliness, eating, playing, resting, and toilet habits. Programs prepare individuals as child-care assistants to assume major responsibilities for caring and guiding the development of young children, or as child-care aides to work under the direction of child-care assistants or professionals. Also instruction is given in supervision of other child-care personnel.

20.0203 *Child Care Management.* An instructional program that prepares individuals to develop and manage effective child care programs by providing instruction in the management of financial operations; selecting and/or developing facilities; selecting staff and staffing patterns; providing staff development opportunities; developing a total program for children; and working with parents, community agencies and organizations, and others concerned with children.

20.0204 *Foster Care/Family Care.* An instructional program that prepares individuals to assume the duties of a foster parent or skilled family day care worker under the supervision of the sponsoring agency. Includes instruction in child growth and development; special needs of deprived or handicapped children; health and safety; nutrition; program/play activities; parental involvement; and laws, regulations, and policies related to family day care services.

20.0205 *Teacher Aide.* An instructional program that prepares individuals to assist a teacher in conducting and carrying out the objectives of a child care program(s) within the context of the school or particular setting. Includes instruction in program planning for a child's development, playground activities, the health and safety of children, and administrative and managerial activities.

20.0299 *Child Care and Guidance Management and Services, Other.* Any instructional program in child care and guidance management and services not described above.

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20.03 ***Clothing, Apparel, and Textiles Management, Production, and Services.*** A group of instructional programs that prepare individuals for occupations concerned with the entire spectrum of clothing, apparel, and textiles management, production, and services, including but not limited to construction; fabric and fabric care; pattern design; principles in clothing construction and selection; fitting and alterations of ready-to-wear garments; custom tailoring; clothing maintenance; and textiles testing.

20.0301 *Clothing, Apparel, and Textiles Management, Production, and Services, General.* An instructional program that generally prepares individuals for occupations concerned with the entire spectrum of clothing, apparel, and textiles management, production, and services, including but not limited to construction; fabric and fabric care; pattern design; principles in clothing construction and selection; fitting and alterations of ready-to-wear garments; custom tailoring; clothing maintenance; and textiles testing.

20.0302 *Clothing Maintenance Aide.* An instructional program that prepares individuals to repair and clean garments and accessories according to customer preferences. Includes instruction in examining garments to determine types of repair, alteration, or cleaning needed; fitting and marking garments for proper repairs; making repairs; assisting with laundering and drycleaning of garments; pressing garments; labeling and bagging garments; assisting in keeping records, keeping shop orderly and clean; and constructing garments in commercial garment or apparel factories as needed.

20.0303 *Commercial Garment and Apparel Construction.* An instructional program that prepares individuals to design and construct ready-to-wear garments and apparel. Includes instruction in designing and drafting patterns for standardized sizes; selecting appropriate fabric; cutting of fabric with commercial cutting equipment; stitching fabric on commercial power sewing equipment; applying finishes and notions to garments and apparel; and pressing and packing garments or apparel.

20.0304 *Custom Apparel/Garment Seamstress.* An instructional program that prepares individuals to construct, alter, and prepare garments to customer specifications. Includes instruction in knowledge of fibers, textiles, fabrics, and notions; understanding and applying metrication in measuring and fitting as may be necessary; constructing, altering, and preparing garments for women, men, and children according to customer specifications; using standard or power sewing machines or various hand stitches; designing, making, and fitting patterns to individuals; laying out patterns on the fabric and cutting out fabric with hand or power driven scissors or shears; basting fabric pieces together and fitting garments to customers; sewing fabrics together with specific seam finishes for particular fabrics; refitting and adjusting garments to customers; finishing by hand or power opeated equipment; and pressing to remove wrinkles and smooth seams, collars, cuffs, and so forth.

20.0305 *Custom Tailoring and Alteration.* An instructional program that prepares individuals to construct, alter, and repair men's, women's, and children's garments. Includes instruction in selection of design, fabric, and notions to customer specifications; taking measurements and fitting; preparing patterns; cutting, sewing, and altering by hand; and/or finishing of garments.

20.0306 *Fashion/Fabric Coordination.* An instructional program that prepares individuals to assist in coordinating garments for various occasions. Includes instruction in fashion design, trends, characteristic styles, and merchandising; describing to customers the garment construction, quality, and fiber content; care and durability; selecting current fashion for figure types, fitting garments on customers; planning and presenting fashion shows; developing fashion displays; assisting home sewers with construction techniques; advising on quantity of fabric needed; measuring and cutting fabric; ordering, receiving, and displaying fabric and merchandise; keeping shop and store clean and orderly; and taking inventories and replenishing stock.

20.0307 *Textiles Testing.* An instructional program that prepares individuals to select and correctly use tools and equipment for specific textiles tests under the direction of clothing or textile technicians. Includes instruction in identifying qualities of various fibers, yarns, and fabrics; collecting and testing fiber slivers, roving, and yarn of fabric samples, making elementary statistical calculations; recording test results; comparing test results with samples or prepared standards; reporting variation from standards to director of quality control; checking and calibrating various testing instruments using metrication; and keeping laboratories clean.

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20.0308 *Wedding/Specialty Consulting.* An instructional program that prepares individuals to advise individuals and/or families with preparation for weddings, including wedding etiquette; selection of attire for bride, groom, attendants, and others; fitting and marking garments for needed alterations; assisting in selection of invitations, flowers, linens, and other home accessories; working with caterers and photographers; keeping records of gifts; constructing, displaying, and selling wedding attire; and conducting wedding fashion shows.

20.0399 *Clothing, Apparel, and Textiles Management, Production, and Services, Other.* Any instructional program in clothing, apparel, and textiles management, production, and services not described above.

20.04 ***Food Production, Management, and Services.*** A group of instructional programs that prepare individuals in managerial, production, and service skills used in institutional, commercial, or self-owned food establishments or other food industry occupations. Includes instruction in planning, selecting, storing, purchasing, preparing, and serving quantity food and food products; nutritive values; safety and sanitation precautions; use and care of commercial equipment; serving techniques; special diets; and management of food establishments.

20.0401 *Food Production, Management, and Services, General.* An instructional program that generally prepares individuals in managerial, production, and service skills used in institutional, commercial, or self-owned food establishments or other food industry occupations. Includes instruction in planning, selecting, storing, purchasing, preparing, and serving quantity food and food products; nutritive values; safety and sanitation precautions; use and care of commercial equipment; serving techniques; special diets; and management of food establishments.

20.0402 *Baking.* An instructional program that prepares individuals to engage in the preparation of bakery food products for use in commercial food establishments, for retail distribution, or for special functions. Includes instruction in making, freezing, and handling baked products, decorating, counter display; and service and packaging of bakery products.

20.0403 *Chef/Cook.* An instructional program that prepares individuals to engage in the preparation and cooking of a variety of foods to main nutritive values and quality control. Instruction is given in the determination of quantity of food to be prepared and the size of servings for different types of foodservices; the use and care of commercial equipment; adherence to sanitation procedures for storage, preparation, and service of foods; the observation of health, safety, and sanitary precautions in the cooking areas; and the use of equipment or utensils.

20.0404 *Dietetic Aide/Assisting.* An instructional program that prepares individuals to utilize nutritional knowledge in preparing and serving meals to individuals with specific dietary needs under the direction of a professional dietitian. Includes instruction in selecting and using specific pieces of equipment for particular tasks in food preparation and services; preparing and serving simple foods according to diet instruction; examining assembled trays for conformance with diet regulations and nutritional values; handling foods, beverages, equipment, utensils, and table settings in order to prevent contamination; observing safety and sanitary standards and regulations; following appropriate emergency procedures; and assisting in the management of dietary facilities. Programs prepare dietetic aides to work under the direction of an assistant and a professional dietitian in performing the less complicated dietetic tasks; programs prepare dietetic assistants to work under the direction of a professional dietitian.

20.0405 *Food Catering.* An instructional program that prepares individuals to engage in booking, planning, and managing the preparation and service of food for special occasions. Includes instruction in arranging for equipment, tables, space, decorations, and entertainment, and for transportation of food and equipment; supervising cleanup; assisting in taking inventories; storing food and supplies; observing safety precautions; and following food handling procedures as specified by health and sanitation regulations. Programs prepare individuals both as food caterers, who perform managerial tasks and are recognized as experts in specialty food preparation and products, and as food-caterer aides, who work under the direction of food caterers.

20.0406 *Food Service.* An instructional program that prepares individuals to select, purchase, prepare, or produce food in quantities; preserve nutritive value of foods; follow standard recipes for quality control; prepare and serve quantity foods; receive, store, and issue foods and supplies; select and use commercial equipment for production and services; observe safety precautions and sanitation regulations; store and handle food and equipment; clean food preparation and service areas; take inventories; and work in or manage food-service establishments.

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20.0407 *Food Testing.* An instructional program that prepares individuals to select and correctly use proper tools and equipment for specified food tests, usually under the direction of food scientists, technicians or home economists. Includes instruction in identifying qualities of various foods; collecting and testing food samples as directed; making elementary statistical calculations; recording test results; comparing test results with samples or prepared standards; reporting variations from standards to director of quality control; and checking and calibrating various testing instruments.

20.0408 *School Food Service.* An instructional program that prepares individuals for overall planning, supervising, purchasing, preparing, and serving goods and food products in school food-service establishments. Includes instruction in planning appetizing and nutritional menus suitable for school-age students; creating an enjoyable and pleasant environment for serving of foods; recording meals served and food used on a daily basis; taking inventory of supplies and equipment; assisting in cleaning school food-service facilities; and performing dishwashing tasks and storage of equipment or food according to health, safety, and sanitation regulations.

20.0499 *Food Production, Management, and Services, Other.* Any instructional program in food production, management, and services not described above.

20.05 ***Home Furnishings and Equipment Mangement, Production, and Services.*** A group of instructional programs that prepare individuals in the entire spectrum of home furnishings and equipment. Includes instruction in assisting purchasers in selecting and maintaining suitable home furnishings and/or equipment; assisting interior designers, decorators, or professional home service directors; making slipcovers, draperies, curtain and window treatments, and upholstery; and designing accessories such as floral arrangements or decorations.

20.0501 *Home Furnishings and Equipment Management, Production, and Services, General.* An instructional program that generally prepares individuals in the entire spectrum of home furnishings and equipment. Includes instruction in assisting purchasers in selecting and maintaining suitable home furnishings and/or equipment; assisting interior designers, decorators, or professional home service directors; making slipcovers, draperies, curtain and window treatments, and upholstery; and designing accessories such as floral arrangements or decorations.

20.0502 *Custom Drapery and Window Treatment Design/Making.* An instructional program that prepares individuals to custom design and construct draperies and other window treatments. Includes instruction in art principles, color design, textiles, fabrics, and finishes; selecting appropriate fabrics; measuring and determining materials needed; determining cost of materials and labor; constructing various types of draperies and other window treatments; using chemical or other finishes to prolong the life of fabrics; and installing draperies or other window treatment fixtures and other materials.

20.0503 *Custom Slipcovering and Upholstering.* An instructional program that prepares individuals to upholster, reupholster, repair, and slipcover home furnishing items in accordance with customer specifications. Includes instruction in art principles, color schemes, textures, designs, and textiles; selecting fabrics, trims, and finishes appropriate for the particular item(s); measuring and determining cost of materials and labor; identifying and using chemical treatments that prolong the life of fabrics or materials; and constructing and using latest techniques and methods for upholstering, reupholstering, repairing, and slipcovering the various types of home furnishings.

20.0504 *Floral Design.* An instructional program that prepares individuals to design and fashion floral arrangements and decorations. Includes instruction in selecting appropriate containers, flowers, and accessories for special occasions or events such as weddings, dinners, banquets, and holiday celebrations; working with consumers, decorators, or caterers to plan and design floral arrangements that are appropriate and within cost limitations; arranging various floral decorations for a variety of settings, including households and commercial businesses; and packaging and delivering the decorative arrangements.

20.0505 *Home Decorating.* An instructional program that prepares individuals in processing procedures, observations, and techniques essential to the development of designs for home environments.

20.0506 *Home Furnishings Aide.* An instructional program that prepares individuals to assist customers in the selection of home furnishings and accessories to meet individual needs, preferences, and budgets. Includes instruction in how to assist interior designers/decorators in planning and decorating customer homes or offices; constructing draperies, window treatment items, and other home accessories; and coordinating arrangements of furniture, samples, and accessories in stores.

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20.0507 *Home-Service Assisting.* An instructional program that prepares individuals to assist professional home-service directors in demonstrating various kinds of large and small appliances and/or household equipment to consumers; in selecting, using, and caring for equipment for maximum consumer satisfaction and energy conservation; and in the planning of kitchens, laundry areas, and other work places in homes, churches, community centers, schools, and other institutions.

20.0599 *Home Furnishings and Equipment Mangement, Production, and Services, Other.* Any instructional program in home furnishings and equipment management, production, and services not described above.

20.06 ***Institutional, Home Management, and Supporting Services.*** A group of instructional programs that prepare individuals for occupations in institutional/executive housekeeping; hotel/motel housekeeping; commercial cleaning; provision of services to the aged in their homes and in institutions; assistance in the management of household tasks; and assistance to consumers in decision making in relation to housing, food, clothing, community resources, and other homemaking concerns.

20.0601 *Institutional, Home Management, and Supporting Services, General.* An instructional program that generally prepares individuals for occupations in institutional/executive housekeeping; hotel/motel housekeeping; commercial cleaning; provision of services to the aged in their home and in institutions; assistance in the management of household tasks; and assistance to consumers in decision making in relation to housing, food, clothing, community resources, and other homemaking concerns.

20.0602 *Companion to the Aged.* An instructional program that prepares individuals to assist aged persons with personal, social, and business affairs, including grooming and dressing; care for clothing and household linens; preparation and service of meals; practice of safety measures to prevent accidents; keeping house; answering correspondence and paying bills; outings for exercise or social activities; and reading, playing games, playing cards, or other entertainment activities. Programs prepare individuals to perform other duties to protect or promote the well-being of the aged/elderly by assisting them in living independently in their own homes, thus preventing adverse effects of isolation and loneliness.

20.0603 *Consumer Aide/Assisting.* An instructional program that prepares individuals to assist consumers in making wise and satisfying selections and rational decisions in the marketplace. Includes instruction in preparing menus or recipes using food specials or in-season foods; posting unit costs; demonstrating new food products and equipment; advising consumers on the use, care, and storage of products and equipment; preparing information exhibits, displays, and handouts; performing personal shopping services; and performing other activities that are appropriate in meeting the needs of consumers.

20.0604 *Custodial Services.* An instructional program that prepares individuals to clean and care for buildings; fixtures; furnishings; floor surfaces such as linoleum, plastic, terrazzo, tile, rugs, and wood; and wall coverings such as panel, paint, plastic, wood, and synthetic materials. Instruction is given in using and caring for tools; dusting, wet mopping, scrubbing, waxing, and refinishing surfaces; cleaning toilets, windows, and walls; applying various cleaning agents, protective coatings, and disinfectants; scheduling work; and purchasing custodial supplies.

20.0605 *Executive Housekeeping.* An instructional program that prepares individuals to clean and care for floors, floor coverings, walls, woodwork, windows, window treatments, furnishings, and equipment; make beds; launder and store household linens; and use cleaning and sanitizing compounds, fluids, and chemicals correctly to protect health and safety of individuals. Advanced instruction and training prepare learners to assume executive housekeeping duties such as establishing standards and procedures for housekeeping staff; planning work schedules; making recommendations to management for repairs, replacement, or relocation of furnishings, equipment, or space; keeping inventories of supplies and equipment; and evaluating performance of staff with recommendations for promotion or dismissal.

20.0606 *Homemaker's Aide.* An instructional program that prepares individuals to assist homemakers in the management and operation of the home. Includes instruction in the care and guidance of children; care of the aged or convalescent; meal planning, marketing, and food preparation and service; laundering and caring for clothing and household linens; cleaning and caring for home furnishings, household furnishings, and household equipment; overall management and decision making; and interpersonal relationships.

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20.0607 *Therapeutic Recreation Aide.* An instructional program that prepares individuals to assist a therapeutic recreation technician in providing recreational activities to patients. Instruction may be given in collecting, setting up, ordering, and storing equipment and supplies; maintaining records; escorting patients between nursing units and therapy centers; and maintaining cleanliness and order in treatment areas.

20.0699 *Institutional, Home Management, and Supporting Services, Other.* Any instructional program in institutional, home management, and supporting programs not described above.

20.99 ***Vocational Home Economics, Other.*** A group of instructional programs in vocational home economics not described above.

20.9999 *Vocational Home Economics, Other.* Any instructional program in vocational home economics not described above.

21. **Industrial Arts.** A summary of groups of instructional programs that provide individuals with knowledge that: (a) pertains to the body of related subject matter, or related courses, organized for the development of understanding about all aspects of industry and technology, including learning experiences involving activities such as experimenting, designating, constructing, evaluating, and using tools, machines, materials, and processes; and (b) assists individuals in making informed and meaningful occupational choices or which prepare them for entry into advanced trade and industrial or technical education programs.

21.01 ***Industrial Arts.*** A group of instructional programs that provide individuals with knowledge that: (a) pertains to the body of related subject matter, or related courses, organized for the development of understanding about all aspects of industry and technology, including learning experiences involving activities such as experimenting, designating, constructing, evaluating, and using tools, machines, materials, and processes; and (b) assists individuals in making informed and meaningful occupational choices or which prepare them for entry into advanced trade and industrial or technical education programs.

21.0101 *Industrial Arts, General.* An instructional program that provides the student with general exploratory experiences and insights into trade and industrial career opportunities so that the individual can make meaningful occupational and educational choices. Instruction is provided in using tools, equipment, mateials, and products associated with industry and technology; role playing in simulated enterprises associated with a number of career areas; studying and analyzing the materials, products, processes, problems, uses, developments, and contributions of many of the elements in various career areas; studying the organization of numerous industries and businesses while experiencing typical aspects of many; and researching, planning, designing, constructing, evaluating, and generalizing in association with problems, projects related to various careers.

21.0102 *Construction.* An instructional program that prepares individuals for enrollment in advanced vocational and technical education programs and includes occupational and basic technical information and laboratory experiences directly related to current practices in the construction industry. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. Individuals are provided with the information and basic skills concerned with the erection, installation, maintenance, or repair of residential and industrial structures. Instructional activities are centered around building structures using a variety of construction materials and processes involving design, masonry, carpentry, electricity, sheetmetal, and plumbing.

21.0103 *Drafting and Design.* An instructional program that prepares individuals for enrollment in advanced vocational and technical education programs and includes occupational and basic technical information and laboratory experiences directly related to drafting in industry. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. Instructional activities involve lettering, freehand sketching, orthographic projection, geometric construction, dimensioning, sectioning, reproduction, pictorial drawing and auxiliary views using technical drawing instruments and techniques.

21.0104 *Electricity/Electronics.* An instructional program that prepares individuals for enrollment in advanced vocational and technical education programs and includes occupational and basic technical information and laboratory experiences directly related to electricity and electronics. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. Individuals are provided with the fundamentals of the theory, measurement, control, and applications of electrical energy. Instructional activities include reading instructions, interpreting schematics, setting up experimental apparatus, making measurements, testing circuits, and recording results.

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21.0105 *Energy, Power, and Transportation.* An instructional program that prepares individuals for understanding the energy, power, and transportation industries and occupations by utilizing exploratory experiences and laboratory activities. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. Instructional activities focus on the theory, maintenance, and servicing of machines and devices with emphasis on energy sources, small gas engines, basic electricity, and methods of transmitting power.

21.0106 *Graphic Arts.* An instructional program that prepares individuals for enrollment in advanced vocational and technical education programs by providing exploratory experiences and laboratory activities related to graphic arts. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. The program focuses on the fundamentals of graphic arts, including the study of information and skills concerned with graphic reproduction using the tools, material and processes of the printing industry. Instructional experiences include designing, composing, printing, and evaluating reproduction techniques.

21.0107 *Manufacturing/Materials Processing.* An instructional program that prepares individuals for enrollment in advanced vocational and technical education programs and includes operational and basic technical information and laboratory experiences directly related to the manufacturing processes used by industry. The purpose of the program is to assist individuals in making meaningful occupational and educational choices. Instructional activities focus on the study of the information and the basic skills concerned with industrial-technical materials and processes, including their properties and utilization as they are fabricated into usable products. Instructional activities involve hand and machine processes for the fabrication, analysis, or testing of metals, woods, and plastics.

21.0199 *Industrial Arts, Other.* Any instructional program in industrial arts not described above.

22. **Law.** A summary of groups of instructional programs that describe the principles and procedures, in the form of legislation, decisions, regulations, and orders, developed and enforced by institutions of government in order to maintain social order.

22.01 *Law.* A group of instructional programs that describe the principles and procedures, in the form of legislation, decisions, regulations, and orders, developed and enforced by institutions of government in order to maintain social order.

22.0101 *Law.* An instructional program that describes the principles and procedures, in form of legislation, decisions, regulations, and orders, developed and enforced by institutions of government in order to maintain social order.

22.0102 *Pre-Law.* An instructional program that prepares individuals to be admitted to and pursue a professional career in law.

22.0103 *Legal Assisting.* An instructional program that prepares individuals to assist professional lawyers or to work in courthouses. Includes instruction in basic principles of law; legal documentation; legal-library operations and utilization; civil and criminal law; legal records; courts; and legal procedures.

22.0199 *Law, Other.* Any instructional program in law not described above.

23. **Letters.** A summary of groups of instructional programs that describe sounds, literature, syntax, phonology, morphology, semantics, sentences, prose and verse, as well as the development of skills and attitudes used in communicating and evaluating thought and feelings through oral and written language.

23.01 *English, General.* A group of instructional programs (see 23.0101).

23.0101 *English, General.* An instructional program that generally describes the skills and techniques essential to learning the English language.

23.02 *Classics.* A group of instructional programs (see 23.0201).

23.0201 *Classics.* An instructional program that describes the language and literature of the ancient Greco-Roman world in English translation.

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23.03 ***Comparative Literature.*** A group of instructional programs (see 23.0301).

23.0301 *Comparative Literature.* An instructional program that describes the comparison of various aspects of literature, based on selected dimensions such as genre, theme, literary period, and language source.

23.04 ***Composition.*** A group of instructional programs (see 23.0401).

23.0401 *Composition.* An instructional program that describes the principles and techniques of selecting, combining, arranging, and developing ideas, and expressing them in appropriate written forms such as narration, exposition, or persuasion.

23.05 ***Creative Writing.*** A group of instructional programs (see 23.0501).

23.0501 *Creative Writing.* An instructional program that describes the techniques of composition of such forms of literature as the short story, verse, drama, and others that involve some degree of spontaneity and exercise of the imagination on the part of the writer.

23.06 ***Linguistics (Includes Phonetics, Semantics, and Philology).*** A group of instructional programs (see 23.0601).

23.0601 *Linguistics (Includes Phonetics, Semantics, and Philology).* An instructional program that describes the descriptive, historical, and theoretical aspects of language, its nature, structure, varieties, and development, including especially sound systems (phonology), grammatical systems (morphology, syntax), lexical systems (vocabulary, semology), and writing systems.

23.07 ***Literature, American.*** A group of instructional programs (see 23.0701).

23.0701 *Literature, American.* An instructional program that describes American writings in prose or verse, especially those of an imaginative or critical character, including biography, criticism, drama, essay, fiction, poetry, myths, and legends.

23.08 ***Literature, English.*** A group of instructional programs (see 23.0801).

23.0801 *Literature, English.* An instructional program that describes British writings in prose or verse, especially those of an imaginative or critical character, including biography, drama, essay, criticism, fiction, poetry, myths and legends.

23.09 ***Rhetoric.*** A group of instructional programs (see 23.0901).

23.0901 *Rhetoric.* An instructional program that describes the effective use of language, including an examination of the patterned use of language for its effects.

23.10 ***Speech, Debate, and Forensics.*** A group of instructional programs (see 23.1001).

23.1001 *Speech, Debate, and Forensics.* An instructional program that describes strategies for improving competence in speaking and listening and the application of forms of argument to testing ideas or reaching decisions.

23.11 ***Technical and Business Writing.*** A group of instuctional programs (see 23.1101).

23.1101 *Technical and Business Writing.* An instructional program that describes the theory, methods, and skills needed for writing scientific, technical, and business papers, and monographs.

23.99 ***Letters, Other.*** A group of instructional programs in letters not described above.

23.9999 *Letters, Other.* Any instructional program in letters not described above.

24. Liberal/General Studies. A summary of groups of instructional programs that describes the foundation necessary for understanding self and society through an appreciation of the concerns of civilization and our common heritage.

24.01 ***Liberal/General Studies.*** A group of instructional programs (see 24.0101).

24.0101 *Liberal/General Studies.* An instructional program that describes the foundation necessary for understanding self and society through an appreciation of the concerns of civilization and our common heritage.

24.0199 *Liberal/General Studies, Other.* Any instructional program in liberal/general studies not described above.

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25. Library and Archival Sciences. A summary of groups of instructional programs that describe the knowledge and skills required to develop, organize, store, retrieve, administer, and facilitate the use of collections of information in such formats as books, documents, manuscripts, machine-readable data bases, filmed and recorded materials, specimens, and artifacts.

25.01 ***Library and Archival Sciences, General.*** A group of instructional programs (see 25.0101).

25.0101 *Library and Archival Sciences, General.* An instructional program that generally describes the knowledge and skills required to develop, organize, store, retrieve, administer, and facilitate the use of collections of information in such formats as books, documents, manuscripts, machine -readable data bases, filmed and recorded materials, specimens, and artifacts.

25.02 ***Archival Science.*** A group of instructional programs (see 25.0201).

25.0201 *Archival Science.* An instructional group that describes the collection, organization, preservation, service, and retrieval of public records, documents of historical significance, and other archival materials.

25.03 ***Library Assisting.*** A group of instructional programs (see 25.0301).

25.0301 *Library Assisting.* An instructional program that prepares individuals to assist professional librarians. Includes instruction in principles, systems, processes, and procedures in library operation; library resources and services; processes of acquisition, cataloging, storage, and display systems; discovery and retrieval of requested materials; management of books, periodicals, and other printed materials; technological media such as audiovisual and education equipment; public services such as library loans; and data-processing implications for automation of records in libraries.

25.04 ***Library Science.*** A group of instructional programs (see 25.0401).

25.0401 *Library Science.* A group of instructional programs that describes the attitudes, knowledge, and skills of library materials and libraries.

25.05 ***Museology.*** A group of instructional programs (see 25.0501).

25.0501 *Museology.* An instructional program that describes the attitudes, knowledge, and skills required to develop, organize, administer, store and retrieve, and facilitate the use of museums and museum materials including art galleries and zoological gardens.

25.99 ***Library and Archival Sciences, Other.*** A group of instructional progtams in library and archival sciences not described above.

25.9999 *Library and Archival Sciences, Other.* Any instructional program in library and archival sciences not described above.

26. Life Sciences. A summary of groups of instructional programs that describe the systematic study of living organisms.

26.01 ***Biology, General.*** A group of instructional programs (see 26.0101).

26.0101 *Biology, General.* An instructional program that generally describes life forms, including the structure, function, reproduction, growth, heredity, evolution, behavior, and distribution of living organisms.

26.02 ***Biochemistry and Biophysics.*** A group of instructional programs (see 26.0201).

26.0201 *Biochemistry and Biophysics.* An instructional program that describes the chemistry of living systems, the biological phenomena that result from the interactions among these systems, including energy changes, and biological phenomena using physical principles and methods.

26.03 ***Botany.*** A group of instructional programs that describe the structure, function, reproduction, growth, heredity, evolution, and descriptions of plant life.

26.0301 *Botany, General.* An instructional program that generally describes the structure, function, reproduction, growth, heredity, evolution, and descriptions of plant life.

26.0302 *Bacteriology.* An instructional program that describes the morphology, physiology, metabolism, and growth of bacteria, and their effects upon substances and other organisms.

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26.0303 *Mycology.* An instructional program that describes the morphology, physiology, taxonomy, and ecology of fungi.

26.0304 *Plant Genetics.* An instructional program that describes the inheritance of traits and characters in plants.

26.0305 *Plant Pathology.* An instructional program that describes the nature, causes, and development of plant diseases.

26.0306 *Plant Pharmacology.* An instructional program that describes the therapeutic and toxic effects of drugs, including pharmacodynamic behavior, metabolism, interactions with other chemicals, and their biochemical and physiological effects on plants.

26.0307 *Plant Physiology.* An instructional program that describes the study of plant functions, including such metabolic processes as photosynthesis, respiration, assimilation, and transpiration.

26.0399 *Botany, Other.* Any instructional program in botany not described above.

26.04 ***Cell and Molecular Biology.*** A group of instructional programs that describe the cell as a unit of organization in plants and animals, and the molecular structure and processes of living organisms.

26.0401 *Cell Biology.* An instructional program that describes the cell as a unit of organization in plants and animals.

26.0402 *Molecular Biology.* An instructional program that describes the molecular structure and processes of living organisms.

26.0499 *Cell and Molecular Biology, Other.* Any instructional program in cell and molecular biology not described above.

26.05 ***Microbiology.*** A group of instructional programs (see 26.0501).

26.0501 *Microbiology.* An instructional program that describes micro-organisms including bacteria, viruses, protista, protozoans, and certain fungi.

26.06 ***Miscellaneous Specialized Areas, Life Sciences.*** A group of instructional programs that describe specialized areas of the life sciences not described elsewhere in life sciences.

26.0601 *Anatomy.* An instructional program that describes the structure of plants and animals including their tissues, organs, and systems.

26.0602 *Biometrics and Biostatistics.* An instructional program that describes the application of mathematical and statistical models and methodology in biology.

26.0603 *Ecology.* An instructional program that describes the interrelationships among organisms and their environments.

26.0604 *Embryology.* An instructional program that describes the formation, development, structure, and functional activities of embryos; organisms in the state of development before emergence from the eff or before metamorphosis.

26.0605 *Endocrinology.* An instructional program that describes the endocrine glands and their secretions in relation to their processes or functions, including their care and treatment.

26.0606 *Histology.* An instructional program that describes the microscopic structures, compositions, and functions of organic tissues in plants, animals, and human beings through selection and preparation of microscopic section.

26.0607 *Marine Biology.* An instructional program that describes the nature and interrelationships of salt-water organisms and their acquatic environments.

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26.0608 *Neurosciences.* An instructional program that describes the anatomy, physiology, biochemistry, and molecular biology of nerves and nervous tissues and their relation to behavior and learning.

26.0609 *Nutritional Sciences.* An instructional program that describes the science of food in relationship to human needs, the nutrients and other substances of food, and the processes by which the organism ingests, digests, absorbs, transports, utilizes, and excretes food substances.

26.0610 *Parasitology.* An instructional program that describes the structure, reproduction, development, distribution, and control of plant and animal parasites.

26.0611 *Radiobiology.* An instructional program that describes the nature and effects of radiation on organisms and biological systems.

26.0612 *Toxicology.* An instructional program that describes the nature, source, identification, and characteristics of poisons, toxic substances, and exogenous chemical agents which can cause death, illness, or injury upon contact with, or ingestion into the body, including the detection and measurement of their effects and the use of antidotes and other curatives.

26.0699 *Miscellaneous Specialized Areas, Life Sciences, Other.* Any instructional program in specialized areas of life sciences not described above.

26.07 ***Zoology.*** A group of instructional programs that describe animals, including their structure, reproduction, growth, heredity, evolution, behavior, and distribution.

26.0701 *Zoology, General.* An instructional program that generally describes animals, including their structure, function, reproduction, growth, heredity, evolution, behavior, and distribution.

26.0702 *Entomology.* An instructional program that describes insects, including life cycle, morphology, physiology, ecology, and taxonomy.

26.0703 *Genetics, Human and Animal.* An instructional program that describes the inheritance of traits and character in human beings and animals.

26.0704 *Pathology, Human and Animal.* An instructional program that describes the nature, causes, and development of human and animal diseases,

26.0705 *Pharmacology, Human and Animal.* An instructional program that describes the therapeutic and toxic effects of drugs, including pharmacodynamic behavior, metabolism, interactions with other chemicals, and the biochemical, and physiological effects on human beings and animals.

26.0706 *Physiology, Human and Animal.* An instructional program that describes human and animal functions, including processes such as respiration, circulation, digestion, excretion, and reproduction.

26.0799 *Zoology, Other.* Any instructional program in zoology not described above.

26.99 ***Life Sciences, Other.*** A group of instructional programs in life sciences not described above.

26.9999 *Life Sciences, Other.* Any instructional program in life sciences not described above.

27. **Mathematics.** A summary of groups of instructional programs that describe the sciences of logical symbolic language and their applications.

27.01 ***Mathematics, General.*** A group of instructional programs (see 27.0101).

27.0101 *Mathematics, General.* An instructional program that generally describes the sciences of logical symbolic language and their applications.

27.02 ***Actuarial Sciences.*** A group of instructional programs (see 27.0201).

27.0201 *Actuarial Sciences.* An instructional program that describes the mathematical and statistical methodology dealing with problems of risks in insurance.

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27.03 ***Applied Mathematics.*** A group of instructional programs (see 27.0301).

27.0301 *Applied Mathematics.* An instructional program that describes the real world systems by deterministic and probabilistic models.

27.04 ***Pure Mathematics.*** A group of instructional programs (see 27.0401).

27.0401 *Pure Mathematics.* An instructional program that describes number, form, arrangement, and associated relationships, using rigorously defined literal numerical and operational symbols.

27.05 ***Statistics.*** A group of instructional programs (see 27.0501).

27.0501 *Statistics.* An instructional program that describes the probabilistic models involving a finite number of outcomes and the science of collecting, describing, and interpreting numerical data.

27.99 ***Mathematics, Other.*** A group of instructional programs in mathematics not described above.

27.9999 *Mathematics, Other.* Any instructional program in mathematics not described above.

28. Military Sciences. A summary of groups of instructional programs that describe the causative factors and tactical principles of warfare, armed conflict, and defense.

28.01 ***Aerospace Science (Air Force).*** A group of instructional programs (see 28.0101).

28.0101 *Aerospace Science (Air Force).* An instructional program that describes the purpose and objectives of the United States Air Force and all its branches, its rank structure, its customs and traditions, and its importance in national defense and security.

28.02 ***Coast Guard Science.*** A group of instructional programs (see 28.0201).

28.0201 *Coast Guard Science.* An instructional program that describes the purpose and objectives of the United States Coast Guard and all its branches, its rank structure, its customs and traditions, and its importance in national defense and security.

28.03 ***Military Science (Army).*** A group of instructional programs (see 28.0301).

28.0301 *Military Science (Army).* An instructional program that describes the purpose and objectives of the United States Army and all its branches, its rank structure, its customs and traditions, and its importance in national defense and security.

28.04 ***Naval Science (Navy, Marines).*** A group of instructional programs (see 28.0401).

28.0401 *Naval Science (Navy, Marines).* An instructional program that describes the purpose and objectives of the United States Navy and Marine Corps and all its branches, its rank structure, its customs and traditions, and its importance in national defense and security.

28.99 ***Military Sciences, Other.*** A group of instructional programs in military sciences not described above.

28.9999 *Military Sciences, Other.* Any instructional program in military sciences not described above.

29. Military Technologies. A summary of groups of instructional programs that prepare individuals to undertake the broad range of technical tasks required to keep the armed forces combat ready. Programs stress specialized, practical knowledge related to the mechanical, scientific, or technical aspects of military science in a variety of areas such as military communications and weapons systems.

29.01 ***Military Technologies.*** A group of instructional programs (see 29.0101).

29.0101 *Military Technologies.* An instructional program that preapres individuals to undertake the broad range of technical tasks required to keep the armed forces combat ready. Programs stress specialized, practical knowledge related to the mechanical, scientific, or technical aspects of military science in a variety of areas such as military communications and weapons systems.

29.0199 *Military Technologies, Other.* Any instructional program in military technologies not described above.

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30. Multi/Interdisciplinary Studies. A summary of groups of instructional programs, the components of which, derive from two or more separate conventional academic instructional programs.

30.01 ***Biological and Physical Sciences.*** A group of instructional programs (see 30.0101).

30.0101 *Biological and Physical Sciences.* An instructional program that describes either a general synthesis of one or more of the biological and physical sciences (for example, applied science or general science), or a specialization which draws from the biological and physical sciences (for example, environmental science/ studies).

30.02 ***Clinical Pastoral Care.*** A group of instructional programs (see 30.0201).

30.0201 *Clinical Pastoral Care.* An instructional program that describes the methods, theories, and techniques of providing care and counseling through the relationship of theology to the practice of the ministry.

30.03 ***Engineering and Other Disciplines.*** A group of instructional programs (see 30.0301).

30.0301 *Engineering and Other Disciplines.* An instructional program that describes either a general synthesis of one or more of the engineering and other disciplines (for example, engineering and mathematics, or engineering and physics), or a specialization which draws from engineering and other disciplines.

30.04 ***Humanities and Social Sciences.*** A group of instructional programs (see 30.0401).

30.0401 *Humanities and Social Sciences.* An instructional program that describes either a general synthesis of one or more of the humanities and social sciences (for example, humanities), or a specialization which draws from the humanities and social sciences (for example, behavorial science, classical civilization, or human development).

30.05 ***Peace Studies.*** A group of instructional programs (see 30.0501).

30.0501 *Peace Studies.* An instructional program that describes the peace development process including the analysis of peace and war systems, dispute settlement techniques, social movements, working for creative change, world order studies, and conflict analysis and regulation.

30.06 ***Systems Science.*** A group of instructional programs (see 30.0601).

30.0601 *Systems Science.* An instructional program that describes a multidisciplinary approach to the study of innate complexity which by synthesizing systemic findings from the natural, social, technological, behavorial and life sciences, and other specialized fields brings holistic perspectives to the solution of problems within a general context.

30.07 ***Women's Studies.*** A group of instructional programs (see 30.0701).

30.0701 *Women's Studies.* An instructional program that describes the history, society, politics, culture, and economics of women.

30.99 ***Multi/Interdisciplinary Studies, Other.*** A group of instructional programs in multi/interdisciplinary studies not described above.

30.9999 *Multi/Interdisciplinary Studies, Other.* Any instructional program in multi/interdisciplinary studies not described above.

31. Parks and Recreation. A summary of groups of instructional programs that describe the principles and procedures of providing parks and recreational facilities and services for the benefit of the general public.

31.01 ***Parks and Recreation, General.*** A group of instructional programs (see 31.0101).

31.0101 *Parks and Recreation, General.* An instructional program that generally describes the principles and procedures of providing parks and recreational facilities and services for the benefit of the general public.

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31.02 ***Outdoor Recreation.*** A group of instructional programs (see 31.0201).

31.0201 *Outdoor Recreation.* An instructional program that describes the establishing, maintaining, and operating of reacreational facilities.

31.03 ***Parks and Recreation Management.*** A group of instructional programs (see 31.0301).

31.0301 *Parks and Recreation Management.* An instructional program that prepares individuals to plan and maintain recreational facilities and programs for public or private agencies.

31.04 ***Water Resources.*** A group of instructional programs (see 31.0401).

31.0401 *Water Resources.* An instructional program that describes the physical, biological, and social sciences and practices which are essential to the understanding and management of water resources for optimum yield and use, as well as conservation.

31.99 ***Parks and Recreation, Other.*** A group of instructional programs in parks and recreation not described above.

31.9999 *Parks and Recreation, Other.* Any instructional program in parks and recreation not described above.

32. Basic Skills. A summary of groups of instructional programs that describe the fundamental skills a person is normally thought to need in order to function productively in society.

32.01 ***Basic Skills.*** A group of instructional programs that describe the fundamental skills a person is normally thought to need in order to function productively in society.

32.0101 *Basic Skills, General.* An instructional program that generally describes the fundamental skills a person is normally thought to need in order to function productively in society.

32.0102 *Academic and Intellectual Skills.* An instructional program that describes the ability to reason through analytical and logical thinking.

32.0103 *Communication Skills.* An instructional program that describes the development of reading, writing, and speaking abilities that are needed to perform day-to-day tasks and which form the basis of later learning and achievement.

32.0104 *Computational Skills.* An instructional program that describes the development of mathematical abilities that are needed to perform day-to-day tasks and which form the basis of later learning and achievement.

32.0105 *Job-Seeking/Changing Skills.* An instructional program that describes the development of skills that are generally needed in order to obtain a job: how to assess one's own capabilities and skills, how to find and use information sources on job openings, how to fill out an application, and how to handle an interview.

32.0106 *Motor Skills.* An instructional program that describes the enhancement of muscular development and coordination.

32.0199 *Basic Skills, Other.* Any instructional program in basic skills not described above.

33. Citizenship/Civic Activities. A summary of groups of instructional programs that describe how individuals can facilitate governmental functions and contribute to the well-being of their community through civic action.

33.01 ***Citizenship/Civic Activities.*** A group of instructional programs that describe how individuals can facilitate governmental functions and contribute to the well-being of their community through civic action.

33.0101 *Citizenship/Civic Activities, General.* An instructional program that generally describes how individuals can facilitate governmental functions and contribute to the well-being of their community through civic action.

33.0102 *American Citizenship.* An instructional program that describes the improvement of an individual's capacity to understand and function as a citizen through a general understanding of the basic principles of American government, voting rights, and so forth.

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33.0103 *Civic Appreciation.* An instructional program that describes an increased awareness of an individual's community through understanding local government and history.

33.0104 *Civic Participation.* An instructional program that describes the improvement of an individual's capacity to actively participate within the community in specific voluntary functions such as an election official.

33.0199 *Citizenship/Civic Activities, Other.* Any instructional program in citizenship/civic activities not described above.

34. **Health-Related Activities.** A summary of groups of instructional programs that describe the promotion of the health of individuals.

34.01 ***Health-Related Activities.*** A group of instructional programs that describe the promotion of the health of individuals.

34.0101 *Health-Related Activities, General.* A group of instructional programs that generally describes the promotion of the health of individuals.

34.0102 *Birth-Related Health Practices.* An instructional program that describes all facets of childbirth including pre- and post-natal care, care of the newborn, and family planning techniques.

34.0103 *Health Enhancement Practices.* An instructional program that describes the principles, techniques, and methods by which individuals can improve their overall physical and emotional well-being.

34.0104 *Health Treatment/Prevention Practices.* An instructional program that describes the principles, techniques, and methods by which individuals can improve or maintain their current physical well-being or focus on a specialized area of health care such as weight loss or stress management.

34.0199 *Health-Related Activities, Other.* Any instructional program in health-related activities not described above.

35. **Interpersonal Skills.** A summary of groups of instructional programs that describe how to effectively live and interact with others, social organization, being a congenial friend and companion, establishing courses of action for others, and influencing others to follow.

35.01 ***Interpersonal Skills.*** A group of instructional programs that describe how to live and interact with others, social organization, being a congenial friend and companion, establishing courses of action for others, and influencing others to follow.

35.0101 *Interpersonal Skills, General.* An instructional program that generally describes how to effectively live and interact with others, social organization, being a congenial friend and companion, establishing courses of action for others, and influencing others to follow.

35.0102 *Building Human Relationships.* An instructional program that describes how to increase one's ability to establish and develop mutually satisfactory ties with other human beings.

35.0103 *Perception of Others.* An instructional program that describes how to elevate an individual's awareness and capacity to interact with others.

35.0104 *Social Role Engineering.* An instructional program that describes how to increase one's ability to understand and cope with others falling in specific roles or groups in society.

35.0199 *Interpersonal Skills, Other.* An instructional program in interpersonal skills not described above.

36. **Leisure and Recreational Activities.** A summary of groups of instructional programs that describe the development of an appreciation for and competency in recreational and leisure-related activities.

36.01 ***Leisure and Recreational Activities.*** A group of instructional programs that describe the development of an appreciation for and competency in recreational and leisure-related activities.

36.0101 *Leisure and Recreational Activities, General.* An instructional program that generally describes the development of an appreciation for and competency in recreational leisure-related activities.

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36.0102 *Crafts (Leisure and Recreational).* An instructional program that describes how to increase one's skills to fashion objects in a specialized area of handwork.

36.0103 *Games.* An instructional program that describes how to increase one's ability to engage in specialized activities for amusement or pleasure.

36.0104 *Hobbies.* An instructional program that describes how to increase one's interest in a specialized area as a recreational pursuit.

36.0105 *Housing/Home Maintenance.* An instructional program that describes how to improve an individual's capacity to perform home repairs and maintenance as well as to acquire additional skills to construct or remodel a home.

36.0106 *Nature Appreciation.* An instructional program that describes how to increase one's understanding and knowledge of the natural environment in which we live.

36.0107 *Pet Care.* An instructional program that describes how to increase one's ability to care for domesticated animals kept for pleasure.

36.0108 *Sports/Physical Education.* An instructional program that describes how to increase one's ability to engage in a particular recreational activity that generally requires physical exertion.

36.0109 *Travel.* An instructional program that describes a particular area through an organized trip or tour or increases an individual's ability to undertake a journey.

36.0199 *Leisure and Recreational Activities, Other.* Any instructional program in leisure and recreational activities not described above.

37. **Personal Awareness.** A summary of groups of instructional programs that describe a person's self-perception, values, attitudes, beliefs, and emotional responses.

37.01 ***Personal Awareness.*** A group of instructional programs that describe a person's self-perception, values, attitudes, beliefs, and emotional responses.

37.0101 *Personal Awareness, General.* An instructional program that generally describes a person's self-perception, values, attitudes, beliefs, and emotional responses.

37.0102 *Coping Skills.* An instructional program that describes how to recognize and deal with a person's own emotions in response to events in their lives, such as a death of a spouse, or another close relative.

37.0103 *Personal Decisionmaking.* An instructional program that describes how to develop individuals' abilities to assess decisions affecting their lives and to make life choices consistent with needs and beliefs.

37.0104 *Self-Perception.* An instructional program that describes how to develop, clarify, or modify the views a person holds about himself.

37.0105 *Values, Attitudes, and Beliefs.* An instructional program that describes how to examine, evaluate, or modify the basic tenets and behavior patterns on the basis of which one conducts their life.

37.0199 *Personal Awareness, Other.* Any instructional program in personnel skills not described above.

38. **Philosophy and Religion.** A summary of groups of instructional programs that describe the critical examination of the categories for describing reality, the nature and contexts of human experience, the methodology of rational inquiry and criteria of practice (Philosophy); and the investigation of organized forms, beliefs, and practices related to eternal principles or transcendent spiritual entities (Religion).

38.01 ***Philosophy.*** A group of instructional programs (see 38.0101).

38.0101 *Philosophy.* An instructional program that describes the basic truths and principles of being, and of knowledge, or conduct in such fields as ethics, metaphysics, and logic.

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38.02 ***Religion.*** A group of instructional programs (see 38.0201).

38.0201 *Religion.* An instructional program that describes the origin, histories, organized forms, beliefs, worship, and practices of specific religions.

38.99 ***Philosophy and Religion, Other.*** A group of instructional programs in philosophy and religion not described above.

38.9999 *Philosophy and Religion, Other.* Any instructional program in philosophy and religion not described above.

39. Theology. A summary of groups of instructional programs that describe the practice and application of theological principles and procedures as they apply to the planning, managing, and organizing of religious activities.

39.01 ***Biblical Languages.*** A group of instructional languages (see 39.0101).

39.0101 *Biblical Languages.* An instructional program that describes the Greek and Hebrew languages as used in the Bible.

39.02 ***Bible Studies.*** A group of instructional programs (see 39.0201).

39.0201 *Bible Studies.* An instructional program that describes the ways in which the Bible has been interpreted and utilized in the continuing evolution of religious traditions.

39.03 ***Missionary Studies.*** A group of instructional programs (see 39.0301).

39.0301 *Missionary Studies.* An instructional program that describes the theories and practices of the Church throughout the world.

39.04 ***Religious Education.*** A group of instructional programs (see 39.0401).

39.0401 *Religious Education.* An instructional program that describes the theories, methods, and techniques of designing, implementing, and evaluating organized learning activities in religion.

39.05 ***Religious Music.*** A group of instructional programs (see 39.0501).

39.0501 *Religious Music.* An instructional program that describes the relationship of theology to the practice of the ministry and all of its associated aspects.

39.06 ***Theological Studies.*** A group of instructional programs (see 39.0601).

39.0601 *Theological Studies.* An instructional program that describes the relationship of theology to the practice of the ministry and all of its associated aspects.

39.99 ***Theology, Other.*** A group of instructional programs in theology not described above.

39.9999 *Theology, Other.* Any instructional program in theology not described above.

40. Physical Sciences. A summary of instructional programs that describes inanimate objects, processes of matter, energy, and associated phenomena.

40.01 ***Physical Sciences, General.*** A group of instructional programs (see 40.0101).

40.0101 *Physical Sciences, General.* An instructional program that generally describes the major topics, concepts, processes, and interrelationships of nonliving matter and associated phenomena.

40.02 ***Astronomy.*** A group of instructional programs (see 40.0201).

40.0201 *Astronomy.* An instructional program that describes matter and energy in the universe, including the solar system, stars, galaxies, and nebula.

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40.03 ***Astrophysics.*** A group of instructional programs (see 40.0301).

40.0301 ***Astrophysics.*** An instructional program that describes the physical and chemical composition of celestial bodies, and of the interactions between matter and radiation within celestial bodies and in interstellar space.

40.04 ***Atmospheric Sciences and Meteorology.*** A group of instructional programs (see 40.0401).

40.0401 ***Atmospheric Sciences and Meteorology.*** An instructional program that describes the chemical and physical properties of the mass of air surrounding the earth, and weather, including air masses and their motions, temperature, atmospheric pressure, clouds, and precipitation, and their relatively short-term interrelation on local, regional, and global scales.

40.05 ***Chemistry.*** A group of instructional programs that describe the micro and macro structure of matter, of the changes matter undergoes, of the energy involved in these changes, and of the models that interpret and the theories and laws that describe these phenomena.

40.0501 ***Chemistry, General.*** A group of instructional programs that generally describes the micro and macro structure of matter, of the changes matter undergoes, of the energy involved in these changes, and of the models that interpret and the theories and laws that describe these phenomena.

40.0502 ***Analytical Chemistry.*** An instructional program that describes the chemical and physical methods and techniques needed to qualitatively, quantitatively, and often structurally characterize a sample, including the proper procedures for obtaining representative samples for analyses and the statistical procedures for evaluating the precision and accuracy of the results.

40.0503 ***Inorganic Chemistry.*** An instructional program that describes all the elements and their compounds, including the isolation, compositions, structures, physical and spectroscopic properties, syntheses, energy relationships, and chemical transformations of these substances, but excluding the hydrocarbons and most of their derivatives.

40.0504 ***Organic Chemistry.*** An instructional program that describes the hydrocarbons and their derivatives, either synthetic or produced by living organisms, including the isolation, compositions, structures, physical and spectroscopic properties, syntheses, energy relationships, and chemical transformations of these substances.

40.0505 ***Pharmaceutical Chemistry.*** An instructional program that describes the chemical and physical properties of organic and inorganic compounds which have medical or pharmaceutical uses, including the synthesis of organic drugs and inorganic pharmaceutical chemistry.

40.0506 ***Physical Chemistry.*** An instructional program that describes the theoretical and experimental investigation of matter, with emphasis on the most fundamental aspects of structure and bonding, and the relationships to the mechanisms and energy changes of transformation.

40.0599 ***Chemistry, Other.*** Any instructional program in chemistry not described above.

40.06 ***Geological Sciences.*** A group of instructional programs that describe the history of the earth and other celestial bodies, especially as recorded in rocks.

40.0601 ***Geology.*** An instructional program that describes the earth and other celestial bodies, including their composition, structure, history, and related changes.

40.0602 ***Geochemistry.*** An instructional program that describes the chemical composition, structure, and reaction of earth materials.

40.0603 ***Geophysics and Seismology.*** An instructional program that describes the effects of physical phenomena on the earth, and earthquakes and artificially produced vibrations in the earth.

40.0604 ***Paleontology.*** An instructional program that describes the fossil evidences of prehistoric life.

40.0699 ***Geological Sciences, Other.*** Any instructional program in geological sciences not described above.

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40.07 ***Miscellaneous Physical Sciences.*** A group of instructional programs that describe specialized areas of the physical sciences not reflected in the other physical sciences groupings.

40.0701 *Metallurgy.* An instructional program that describes the chemical and physical properties of metals.

40.0702 *Oceanography.* An instructional program that describes the ocean and its phenomena, including the physical and chemical properties of water; the topography and composition of the ocean bottom; waves, currents, and tides; and the formation of islands.

40.0703 *Earth Science.* An instructional program that generally describes the origin and structure of the earth.

40.0799 *Miscellaneous Physical Sciences, Other.* Any instructional program in miscellaneous physical sciences not described above.

40.08 ***Physics.*** A group of instructional programs that describe the physical properties and interactions of matter and energy, including equilibrium, power, wave phenomena, mechanics, heat, electricity, magnetism, sound, light, special relativity, and the particular nature of matter.

40.0801 *Physics, General.* An instructional program that generally describes the physical properties and interactions of matter and energy, including equilibrium, power, wave phenomena, mechanics, heat, electricity, magnetism, sound, light, special relativity, and the particular nature of matter.

40.0802 *Atomic/Molecular Physics.* An instructional program that describes the properties and behavior of matter on the smallest scale at which chemical elements can be identified.

40.0803 *Electron Physics.* An instructional program that describes the behavior and properties of the electron.

40.0804 *Elementary Particle Physics.* An instructional program that describes the fundamental particles of matter that are smaller than an atom, including protrons, neutrons, and alpha and beta particles.

40.0805 *Fluids and Plasmas.* An instructional program that describes the properties and behavior of fluids, i.e., liquids, gases, and plasmas.

40.0806 *Nuclear Physics.* An instructional program that describes the intrinsic properties of nucelons and the nucelon-nuclear interaction, nuclear models, and nuclear reactions.

40.0807 *Optics.* An instructional program that describes the nature and propagation of light.

40.0808 *Solid State Physics.* An instructional program that describes the electrical, magnetic, thermal, and optical properties and processes within solids, including theories of conduction of metals, semiconductors, and crystals.

40.0899 *Physics, Other.* Any instructional program in physics not described above.

40.09 ***Planetary Science.*** A group of instructional programs (see 40.0901).

40.0901 *Planetary Science.* An instructional program that describes the geology of planets other than the earth.

40.99 ***Physical Sciences, Other.*** A group of instructional programs in the physical sciences not described above.

40.9999 *Physical Sciences, Other.* Any instructional program in physical sciences not described above.

41. Science Technologies. A summary of groups of instructional programs that prepare individuals to support and assist various scientists and engineers. Programs stress specialized, practical knowledge related to the mechanical, mathematical, scientific, or technical aspects of various biological, physical, and nuclear sciences.

41.01 ***Biological Technologies.*** A group of instructional programs that prepare individuals to support and assist biologists in a variety of settings, including commercial, governmental, educational, or other research, biological or pharmaceutical laboratories.

41.0101 *Biological Laboratory Technology.* An instructional program that prepares individuals to support biological scientists in commercial, governmental, or other biological or pharmaceutical laboratories, or to assist teachers in biological-science classrooms or laboratory situations. Includes instruction in identification of biological and zoological specimens (both microorganisms and macroorganisms) and in preparing or processing specimens for biological-science research or operational procedures.

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41.0102 *Oceanographic (Biological) Technology.* An instructional program that prepares individuals to support marine biologists or oceanographers in collecting or identifying samples of marine organisms, invertebrates, or vertebrates; identifying them biologically; and determining the degree of normalcy or abnormalcy of the specimens. Includes instruction in the biology of marine organisms; processes and materials for collecting, identifying, preserving, dissecting, describing, staining, drawing, and labelling marine organisms found in oceans, lakes, rivers, and stream systems; the development, maintenance, and exploration of fisheries and marine plants; ecology; and effective functioning on board all type of boats and ships.

41.0199 *Biological Technologies, Other.* Any instructional program in biological technologies not described above.

41.02 ***Nuclear Technologies.*** A group of instructional programs that prepare individuals to support professionals engaged in developing, manufacturing, testing, researching, maintaining, storing, and handling materials in the nuclear science and energy field. Includes instruction in nuclear physics, radioisotopes, nuclear instrumentation, and safety procedures.

41.0201 *Nuclear Materials Handling Technology.* An instructional program that prepares individuals to support nuclear scientists and engineers in handling nuclear materials and in fabricating, labeling, packaging, and safely transporting nuclear fuel elements and radioactive nuclear power plant wastes. Includes instruction in nuclear radiation, design and fabrication of nuclear fuel elements, detection and intensity measurement of radioactivity, and related safety procedures.

41.0202 *Nuclear Power Plant Operation Technology.* An instructional program that prepares individuals to become licensed nuclear power plant operators. Includes instruction in radiology, radiation detection, design, control, materials, processes, material balances, equipment, piping systems, and instrumentation in the nuclear power plant, with emphasis on safety procedures and precautions.

41.0203 *Nuclear Power Plant Radiation Control Technology.* An instructional program that prepares individuals to detect radioactive materials, to measure intensity or level of radiation, to protect workers, and to decontaminate radioactive areas caused by spills, mishandled materials, or other unusual causes. Includes instruction in nuclear and radiation physics, detection and measurement of radioactive materials, mandated codes and permissible levels of radiation, calibration and use of detecting instruments, radiation by-products, and radioisotopes and their control.

41.0204 *Radiologic (Physical) Technology.* An instructional program that prepares individuals to use radioactive isotopes for industrial, commercial, and research purposes such as determining the flow of underground streams, measuring rainfall in areas remote from human habitation, nondestructuve testing and inspection of materials, and continuous measurement of paper or metal thickness.

41.0299 *Nuclear Technologies, Other.* Any instructional program in nuclear technologies not described above.

41.03 ***Physical Science Technologies.*** A group of instructional programs that prepare individuals to support and assist physical scientists and other related professionals. Programs stress specialized, practical knowledge related to the mechanical, scientific, or technical aspects of the physical sciences.

41.0301 *Chemical Technology.* An instructional program that prepares individuals to support chemists in researching, piloting, controlling, directing and maintaining processing and quality control in the chemical manufacturing field. Includes instruction in material handling, crushing, grinding, and sizing; extraction, distillation, evaporation, drying, absorption, and heat transfer; and assisting in design installation and operation of pilot plants for chemical manufacturing processes.

41.0302 *Geological Technology.* An instructional program that prepares individuals to support and assist geologists. Programs stress specialized, practical knowledge related to the mechanical, scientific, or technical aspects of geology.

41.0303 *Metallurgical Technology.* An instructional program that prepares individuals to support professional personnel in the production of, quality control of, and research on metals. Includes instruction in conducting tests on the properties of metals; designing and developing pilot and production plants; developing, operating, and altering test procedures, processes, and equipment; and the analysis of data and preparation of reports.

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41.0304 *Meteorological Technology.* An instructional program that prepares individuals to assist meteorologists or to work in the interpretation and presentation of weather information, based on reports from the National Weather Service or other agency sources. Includes instruction in the theory and applied science of meteorology and weather forecasting; methods, procedures, techniques, and practices used in identifying weather-making atmospheric phenomena; use of instruments for determining wind velocity, rainfall, temperature, and other meteorological conditions; the system for charting weather and the symbols for describing weather conditions; photography and photogrammetry as related to the identification of weather-making phenomena (as shown on weather satellite photographs); and making weather predictions on weather systems charted and observed at a given time.

41.0305 *Oceanographic (Physical) Technology.* An instructional program that prepares individuals to understand the specialized equipment, instruments, procedures, and techniques determining the depth, temperature, chemical composition, and rate and direction of flow of underwater currents in oceans, seas, or other major bodies of water; the construction and operation of devices used to make measurements of the characteristics of bodies of water, temperature gradients, chemical composition, and dynamics of water movement; and effective functioning on board ship.

41.0399 *Physical Science Technologies, Other.* Any instructional program in physical science technologies not described above.

41.99 ***Science Technologies, Other.*** A group of instructional programs in science technologies not described above.

41.9999 *Science Technologies, Other.* Any instructional program in science technologies not described above.

42. **Psychology.** A summary of groups of instructional programs that describe the behavior and experience of people.

42.01 ***Psychology, General.*** A group of instructional programs (see 42.0101).

42.0101 *Psychology, General.* An instructional program that describes the behavior and experience of people.

42.02 ***Clinical Psychology.*** A group of instructional programs (see 42.0201).

42.0201 *Clinical Psychology.* An instructional program that describes the application of appropriate methods and theories selected from psychology and other fields as they relate to dealing with the troubled person.

42.03 ***Cognitive Psychology.*** A group of instructional programs (see 42.0301).

42.0301 *Cognitive Psychology.* An instructional program that describes the acquisition and recall of new behaviors, and of the processes of learning new activities, and of retaining them through time.

42.04 ***Community Psychology.*** A group of instructional programs (see 42.0401).

42.0401 *Community Psychology.* An instructional program that describes the theory and practice of using psychologists, and psychological facts in psychological work not in the academic, school, and clinical contexts, but rather in the broader social community, working with private and public organizations.

42.05 ***Comparative Psychology.*** A group of instructional programs (see 42.0501).

42.0501 *Comparative Psychology.* An instructional program that describes the behavior of members of particular species, and the relationship of the behaviors of the species to their evolutionary origins.

42.06 ***Counseling Psychology.*** A group of instructional programs (see 42.0601).

42.0601 *Counseling Psychology.* An instructional program that describes the theory and practice of systematically selecting the facts and theories of psychology with the intent of advising people about their problems.

42.07 ***Developmental Psychology.*** A group of instructional programs (see 42.0701).

42.0701 *Developmental Psychology.* An instructional program that describes progressive changes in the behavioral process of individuals as a function of aging through the life span, from conception to death.

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42.08 ***Experimental Psychology.*** A group of instructional programs (see 42.0801).

42.0801 *Experimental Psychology.* An instructional program that describes the general body of methods, data, and laws that have been derived by scientific research, including theoretical and systematic points of view applicable to the prediction, control, and understanding of the behavior of individual human organisms and other species.

42.09 ***Industrial and Organizational Psychology.*** A group of instructional programs (see 42.0901).

42.0901 *Industrial and Organizational Psychology.* An instructional program that describes the application of psychological knowledge and methodology to specific work-related problems in industry and government.

42.10 ***Personality Psychology.*** A group of instructional programs (see 42.1001).

42.1001 *Personality Psychology.* An instructional program that describes the unique organization of the fairly permanent characteristics that set the individual apart from other individuals and, at the same time, determine how others respond to that person.

42.11 ***Physiological Psychology.*** A group of instructional programs (see 42.1101).

42.1101 *Physiological Psychology.* An instructional program that describes the processes that determine what actions will occur at a particular time, and the strength or precision with which those actions will occur.

42.12 ***Psycholinguistics.*** A group of instructional programs (see 42.1201).

42.1201 *Psycholinguistics.* An instructional program that describes the psychology of language, including the behavorial processes that enter into the generation of speech and writing, and the understanding of both spoken and written languages.

42.13 ***Psychometrics.*** A group of instructional programs (see 42.1301).

42.1301 *Psychometrics.* An instructional program that describes the mathematical and statistical procedures used in psychological test construction and validation, and of the general problems of the measurement of behavior.

42.14 ***Psychopharmacology.*** A group of instructional programs (see 42.1401).

42.1401 *Psychopharmacology.* An instructional program that describes the changes in behavior that occur as a function of drug-ingestion, and the psychological processes associated with such changes, including altered states of consciousness and addiction.

42.15 ***Quantitative Psychology.*** A group of instructional programs (see 42.1501).

42.1501 *Quantitative Psychology.* An instructional program that describes the application of mathematical and statistical models and methodology in psychology.

42.16 ***Social Psychology.*** A group of instructional programs (see 42.1601).

42.1601 *Social Psychology.* An instructional program that describes the behavior of the individual as a member of a group, and of the processes of associating individuals together.

42.99 ***Psychology, Other.*** A group of instructional programs in psychology not described above.

42.9999 *Psychology, Other.* Any instructional program in psychology not described above.

43. Protective Services. A summary of groups of instructional programs that describe the principles and procedures for providing police, fire, and other safety services, and for managing penal institutions.

43.01 ***Criminal Justice.*** A group of instructional programs that describe the principles and procedures of developing, administrating, and managing correctional, law enforcement, and forensic services.

43.0101 *Correctional Administration.* An instructional program that describes the theories and practices of structuring, managing, directing, and controlling agencies and organizations whose purpose it is to provide safety and correctional services.

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43.0102 *Corrections.* An instructional program that describes the theories, principles, and techniques of developing, administrating, and managing services for the incarceration, behavior modification, rehabilitation, and returning of legal offenders to society.

43.0103 *Criminal Justice Administration.* An instructional program that describes the theories and practices of structuring, managing, directing, and controlling criminal justice agencies (e.g., the various judicial and administrative court systems).

43.0104 *Criminal Justice Studies.* An instructional program that generally describes the principles and procedures of developing, administrating, and managing correctional, law enforcement, and forensic services.

43.0105 *Criminal Justice Technology.* An instructional program that prepares individuals to work in a law enforcement agency, crime laboratory, mobile unit dealing with physical evidence, juvenile court, or correctional institution. Includes instruction in patrol and investigative activities; traffic control; using polygraph equipment; procedures for initial contact with the public in such matters as obtaining information, preparing reports, and testifying in court; techniques for collection, preparation, and transportation of physical evidence; methods of crime prevention; and methods for investigation and referral of neglected dependent children, delinquents, and youthful offenders.

43.0106 *Forensic Studies.* An instructional program that describes the theories, principles, and techniques of developing, administrating, and managing services for relating and applying medical facts to legal problems.

43.0107 *Law Enforcement.* An instructional program that describes the theories, principles, and techniques of developing, administrating, and managing services for the safety and protection of people and property.

43.0108 *Law Enforcement Administration.* An instructional program that describes the theories and practices of structuring, managing, directing, and controlling agencies whose purpose it is to provide law enforcement.

43.0109 *Security Services.* An instructional program that prepares individuals to police private property to prevent thievery, malicious damage, and dishonesty among employees or patrons, and to maintain order.

43.0199 *Criminal Justice, Other.* Any instructional program in criminal justice not described above.

43.02 ***Fire Protection.*** A group of instructional programs that describe the theories, principles, and techniques of developing, admininstrating, and managing services for fire prevention, fire fighting, and rescue.

43.0201 *Fire Control and Safety Technology.* An instructional program that prepares individuals to function as a fire control, prevention, and safety specialist. Includes instruction in structural design and materials; meteorological factors impinging upon fire situations; chemistry of combustion; techniques for coping with fires; procedures for handling hazardous materials (such as petroleum products, and other volatile, explosive, or corrosive materials) either routinely or in an accident situation; methods for inspection of equipment and its proper use; and methods for inspection of public and private property for safety conditions.

43.0202 *Fire Protection Administration.* An instructional program that describes the theories, principles, and techniques of developing, administrating, and managing services for fire prevention, fire fighting, and rescue.

43.0203 *Firefighting.* An instructional program that prepares individuals to fight fires, and control the outbreak of fire. Includes instruction in fire department organization; the use of water and other materials in firefighting and various kinds of equipment such as extinguishers, pumps, hoses, ropes, ladders, gas masks, hydrants, and standpipe and sprinkler systems; methods of entry and rescue and salvage practices and equipment; and fire and arson inspection and investigation techniques.

43.0299 *Fire Protection, Other.* Any instructional program in fire protection not described above.

43.99 ***Protective Services, Other.*** A group of instructional programs in protective services not described above.

43.9999 *Protective Services, Other.* Any instructional program in protective services not described above.

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44. Public Affairs. A summary of groups of instructional programs that describe the formulation, implementation, administration, evaluation, and management of public policies and programs, including those services which are directed toward the betterment of economic and social conditions.

44.01 ***Public Affairs, General.*** A group of instructional programs (see 44.0101).

44.0101 *Public Affairs, General.* An instructional program that generally describes the formulation, implementation, administration, evaluation, and management of public policies and programs, including those services which are directed toward the betterment of economic and social conditions.

44.02 ***Community Services.*** A group of instructional programs (see 44.0201).

44.0201 *Community Services.* An instructional program that describes the theories, methods, and techniques of combining school and community resources to provide information, instruction, and recreation to all members of a community.

44.03 ***International Public Service.*** A group of instructional programs (see 44.0301).

44.0301 *International Public Service.* An instructional program that describes the principles and theories underlying the structure and processes of major international organizations, such as the United Nations and the Organization of American States.

44.04 ***Public Administration.*** A group of instructional programs (see 44.0401).

44.0401 *Public Administration.* An instructional program that describes the knowledge, skills, values, and behaviors involved in the formulation of public policies and the management of public services.

44.05 ***Public Policy Studies.*** A group of instructional programs (see 44.0501).

44.0501 *Public Policy Studies.* An instructional program that describes the principles and techniques by which systematic judgments and evaluative assessments are made with respect to particular public policy.

44.06 ***Public Works.*** A group of instructional programs that describe the role of the government in constructing, maintaining, and providing structures and utilities for use by the general public.

44.0601 *Public Sanitation.* An instructional program that describes the theories, techniques, planning, and development of provisions for the maintenance of the health and welfare of the general public.

44.0602 *Public Transportation.* An instructional program that describes the theories, techniques, planning, and development of facilities and systems for transporting people and goods.

44.0603 *Public Utilities.* An instructional program that describes the theories, techniques, planning, and development of services such as electricity, waste removal, water, power, and transportation, which are owned and operated, or regulated by governmental agencies, on behalf of the general public.

44.0699 *Public Works, Other.* Any instructional program in public works not described above.

44.07 ***Social Work.*** A group of instructional programs that describe the social interventions that enhance, conserve, and augment the means by which persons, individually or collectively, can solve disruptions in their social existence.

44.0701 *Social Work, General.* An instructional program that generally describes the social interventions that enhance, conserve, and augment the means by which persons, individually or collectively, can solve disruptions in their social existence.

44.0702 *Medical Social Work.* An instructional program that describes how to remedy social problems that relate specifically to health conditions, such as mental health and mental retardation, physical health, chemical dependency, and others that generally occur in health care settings.

44.0799 *Social Work, Other.* Any instructional program in social work not described above.

44.99 ***Public Affairs, Other.*** A group of instructional programs in public affairs not described above.

44.9999 *Public Affairs, Other.* Any instructional program in public affairs not described above.

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45. Social Sciences. A summary of groups of instructional programs that describe the substantative portions of behavior, past and present activities, interactions, and organizations of people associated together for religious, benevolent, cultural, scientific, political, patriotic, or other purposes.

45.01 ***Social Sciences, General.*** A group of instructional programs (see 45.0101).

45.0101 *Social Sciences, General.* An instructional program that generally describes the major principles and perspectives of the social sciences.

45.02 ***Anthropology.*** A group of instructional programs (see 45.0201).

45.0201 *Anthropology.* An instructional program that describes the historic and prehistoric origins of man, his physical and cultural development, racial characteristics, social customs, and beliefs.

45.03 ***Archeology.*** A group of instructional programs (see 45.0301).

45.0301 *Archeology.* An instructional program that describes the historic and prehistoric peoples and their culture through the scientific analysis of their artifacts, inscriptions, monuments, and other remains.

45.04 ***Criminology.*** A group of instructional programs (see 45.0401).

45.0401 *Criminology.* An instructional program that describes the causes of crime and the methods of detecting and dealing with crime and the criminal, including crime statistics, theories of punishment, and the role of law enforcement in society as an agent for the prevention and treatment of crime.

45.05 ***Demography.*** A group of instructional programs (see 45.0501).

45.0501 *Demography.* An instructional program that describes the vital social statistics, including births, deaths, diseases, marriages, and education rates of populations.

45.06 ***Economics.*** A group of instructional programs (see 45.0601).

45.0601 *Economics.* An instructional program that describes the transformation of limited resources into goods and services which, upon distribution, are again transformed by consumption to yield satisfaction of human wants.

45.07 ***Geography.*** A group of instructional programs (see 45.0701).

45.0701 *Geography.* An instructional program that describes the earth and its life; the description of land, sea, and air; and the distribution of plant and animal life, including human beings and industries.

45.08 ***History.*** A group of instructional programs (see 45.0801).

45.0801 *History.* An instructional program that describes the past, including the recording, gathering, criticizing, synthesizing, and interpreting evidence about past events.

45.09 ***International Relations.*** A group of instructional programs (see 45.0901).

45.0901 *International Relations.* An instructional program that describes the agencies, operations, and principles involved in communication and interaction among nations, with emphasis upon the relationship between political subdivisions and governments.

45.10 ***Political Science and Government.*** A group of instructional programs (see 45.1001).

45.1001 *Political Science and Government.* An instructional program that describes the description and analysis of political institutions and processes, including the origin, development, geographical units, forms, sources of authority, powers, purposes, functions, and operations of government.

45.11 ***Sociology.*** A group of instructional programs (see 45.1101).

45.1101 *Sociology.* An instructional program that describes human society, social institutions, and social relationships, including the development, purposes, structures, and functions of human groups.

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45.12 ***Urban Studies.*** A group of instructional programs (see 45.1201).

45.1201 *Urban Studies.* An instructional program that describes the history, society, politics, culture, and economics of urban areas.

45.99 ***Social Sciences, Other.*** A group of instructional programs in social sciences not described above.

45.9999 *Social Sciences, Other.* Any instructional program in social sciences not described above.

46. Construction Trades. A summary of groups of instructional programs that prepare individuals to erect, install, maintain, and repair buildings, highways, airports, missile sites, and other structures using materials such as metal, wood, stone, brick, glass, concrete, and composition substances. Includes instruction in cost estimating; cutting, fastening, and fitting various materials; the use of hand and power tools; and in following technical specifications and blueprints.

46.01 ***Brickmasonry, Stonemasonry, and Tile Setting.*** A group of instructional programs that prepare individuals to lay brick, concrete block, hard tile, marble and related materials, using trowels, levels, hammers, chisels and other handtools.

46.0101 *Brickmasonry, Stonemasonry, and Tile Setting, General.* An instructional program that generally prepares individuals to lay brick, concrete block, hard tile, marble and related materials, using trowels, levels, hammers, chisels and other handtools.

46.0102 *Brick, Block, and Stonemasonry.* An instructional program that prepares individuals to lay bricks and/or blocks. Includes instruction in laying out and/or spacing bonds; determining vertical and horizontal alignment of courses using gauges, plumb-bobs, and levels; and cutting, notching, and shaping blocks, bricks, terra-cotta veneer, glass, and stone to construct or repair walls, partitions, arches, sewers, and fireplaces.

46.0103 *Tile Setting.* An instructional program that prepares individuals to apply tile to walls, floors, ceilings, and roof decks. Includes instruction in fastening lath to walls; spreading plaster and/or concrete; leveling to the desired depth; spreading mastic or adhesive base; and in cutting, shaping, and positioning tile.

46.0199 *Brickmasonry, Stonemasonry, and Tile Setting, Other.* Any instructional program in brickmasonry, stonemasonry, and tile setting not described above.

46.02 ***Carpentry.*** A group of instructional programs (see 46.0201).

46.0201 *Carpentry.* An instructional program that prepares individuals to lay out, fabricate, erect, install, and repair wooden structures and fixtures, using hand and power tools. Includes instruction in common systems of framing, construction materials, estimating, and blueprint reading.

46.03 ***Electrical and Power Transmission Installation.*** A group of instructional programs that prepare individuals to install, operate, maintain, and repair residential, commercial, and industrial electrical systems, and the power lines that transmit electricity from its source of generation to its place of consumption.

46.0301 *Electrical and Power Transmission Installation, General.* An instructional program that generally prepares individuals to install, operate, maintain, and repair residential, commercial, and industrial electrical systems, and the power lines that transmit electricity from its source of generation to its place of consumption.

46.0302 *Electrician.* An instructional program that prepares individuals to install, operate, maintain, and repair electrically-energized systems such as residential, commercial, and industrial electric-power wiring, and D.C. and A.C. motors, controls, and electrical-distribution panels. Includes instruction in the use of test equipment.

46.0303 *Lineworker.* An instructional program that prepares individuals to install, operate, and maintain local, long-distance, and rural lines; erect and construct pole and tower lines; and install underground lines.

46.0399 *Electrical and Power Transmission Installation, Other.* Any instructional program in electrical and power transmission installation not described above.

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46.04 *Miscellaneous Construction Trades.* A group of instructional programs that prepare individuals for construction trades other than those described under other groupings in the construction trades category.

46.0401 *Building Maintenance.* An instructional program that prepares individuals to keep a building functioning; service a variety of structures including commercial and industrial buildings and mobile homes. Includes instruction in the basic maintenance and repair skills related to the air conditioning, heating, plumbing, electrical, and other mechanical systems.

46.0402 *Concrete Placing and Finishing.* An instructional program that prepares individuals to construct forms; cut, erect, and fasten steel reinforcing bars and wire mesh; compact concrete by hand or with pneumatic vibrators; and finish exposed surfaces during hardening and after forms have been removed. Includes instruction in the use of chemical additives, and in hand and power concrete-handling equipment.

46.0403 *Construction Inspection.* An instructional program that prepares individuals to inspect and oversee construction of bridges, buildings, dams, highways, and other types of construction work to ensure that procedures and materials comply with plans and specifications.

46.0404 *Drywall Installation.* An instructional program that prepares individuals to install wallboard, plasterboard, or other interior surfaces in structures.

46.0405 *Floor Covering Installation.* An instructional program that prepares individuals to test and repair subfloors and to install resilient tile, sheet goods, or carpeting. Includes instruction in installing underlayments; cutting, fitting, and gluing lining; tacking, stapling, or taping padding; planning, laying out, fitting and installing resilient flooring by gluing or loose-lay methods; installing cover bases, self coving and carpet fasteners; trimming and seaming carpet; and installing stair treads, risers, and countertops.

46.0406 *Glazing.* An instructional program that prepares individuals to prepare, fit, and install glass in structural openings such as windows, doors, and partitions or in display cases and table tops.

46.0407 *Insulation Installation.* An instructional program that prepares individuals to install batt, blanket, board, loose fill, and other forms of insulation in residential, commercial, and industrial buildings in order to heat and cool interiors in energy-efficient ways.

46.0408 *Painting and Decorating.* An instructional program that prepares individuals to finish exterior and interior surfaces by applying protective or decorative coating materials, such as paint, lacquer, and wallpaper. Includes instruction in scraping, burning, or sanding surfaces; making, mixing, and matching paint colors, applying coating with brush, roller, or spray gun; and cutting, pasting, and hanging wallpaper.

46.0409 *Plastering.* An instructional program that prepares individuals to apply plaster, stucco, and similar materials to interior and exterior surfaces. Includes instruction in lathing and in surface preparation, smoothing, and finishing.

46.0410 *Roofing.* An instructional program that prepares individuals to cover roofs and exterior walls of structures with waterproofing or insulating materials, such as asphalt, aluminum, slate, wood, and related composition materials.

46.0411 *Terrazzo Installation.* An instructional program that prepares individuals to apply cement, sand, pigment, and marble chips to floors and stairways to attain a durable and decorative surface; cut metal strips to develop designs, patterns, or levels of finish; and grind and polish surfaces to specifications.

46.0499 *Miscellaneous Construction Trades, Other.* Any instructional program in miscellaneous construction trades not described above.

46.05 *Plumbing, Pipefitting, and Steamfitting.* A group of instructional programs that prepare individuals to lay out, assemble, install, and maintain piping, fixtures, and piping systems for steam, hot water, heating, cooling, drainage, lubricating, sprinkling, and industrial processing systems. Includes instruction in material selection and use of tools to cut, bend, join, and weld pipes.

46.0501 *Plumbing, Pipefitting, and Steamfitting, General.* An instructional program that generally prepares individuals to lay out, assemble, install, and maintain piping, fixtures, and piping systems for steam, hot water, heating, cooling, drainage, lubricating, sprinkling, and industrial processing systems. Includes instruction in material selection and use of tools to cut, bend, join, and weld pipes.

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46.0502 *Pipefitting and Steamfitting.* An instructional program that prepares individuals to lay out, fabricate, assemble, install, and maintain piping and piping systems, fixtures, and equipment for steam, hot water, heating, cooling, lubricating, sprinkling, and industrial processing systems, on the basis of knowledge of systems operation and the study of building plans or working drawings.

46.0503 *Plumbing.* An instructional program that prepares individuals to assemble, install, and repair pipes, fittings, and fixtures of heating, water, and drainage systems, according to specifications and plumbing codes.

46.0599 *Plumbing, Pipefitting, and Steamfitting, Other.* Any instructional program in plumbing, pipefitting, and steamfitting not described above.

46.99 ***Construction Trades, Other.*** A group of instructional programs in construction trades not described above.

46.9999 *Construction Trades, Other.* Any instructional program in construction trades not described above.

47. **Mechanics and Repairers.** A summary of groups of instructional programs that prepare individuals in the adjustment, maintenance, part replacement, and repair of tools, equipment, and machines.

47.01 ***Electrical and Electronics Equipment Repair.*** A group of instructional programs that prepare individuals to operate, maintain, and repair business machines, communications equipment, major and small appliances, commercial vending machines, and related equipment. Includes instruction in electrical circuitry, simple gearing, linkages and lubrication of machines and appliances, and the use of testing equipment.

47.0101 *Electrical and Electronics Equipment Repair, General.* An instructional program that generally prepares individuals to operate, maintain, and repair business machines, communications equipment, major and small appliances, commercial vending machines, and related equipment. Includes instruction in electrical circuitry, simple gearing, linkages and lubrication of machines and appliances, and the use of testing equipment.

47.0102 *Business Machine Repair.* An instructional program that prepares individuals to maintain and repair a variety of office machines, such as typewriters, dictation machines, calculators, data-processing equipment, duplicating machines, and mailing machines. Includes instruction in diagnostic techniques, the use of testing equipment, and the principles of mechanics, electricity, and electronics as they relate to the repair of business machines.

47.0103 *Communication Electronics.* An instructional program that prepares individuals to assemble, install, operate, maintain, and repair one- and two-way communications equipment and systems, including AM and FM radio, television, hearing aids, and other electronic communication devices, or systems. Includes instruction in using actual equipment or educational trainers, in various types of equipment, motors, mechanical devices, power suppliers, amplifiers, and digital circuitry; the use of testing equipment; and Federal Communications Commission (FCC) licensing requirements.

47.0104 *Computer Electronics.* An instructional program that prepares individuals to assemble, install, operate, maintain, and repair computers and digital-control instruments. Includes instruction in power supplies, number systems, gating logic, A-to-D and D-to-A counters, displays, timing circuitry, memory structure, address modes, buffers and registers, microprocessor design, peripheral equipment, programming, and interfacing, including the use of testing equipment and various computer electronic applications.

47.0105 *Industrial Electronics.* An instructional program that prepares individuals to assemble, install, operate, maintain, and repair electrical/electronic equipment used in industry and manufacturing. Includes instruction in using actual equipment, in various types of equipment such as power supplies, amplifiers, motors, controls, digital and computer circuitry, synchro and servomechanisms, mechanical-power-transfer systems, hydraulic systems, and three-phase A.C., electronic wave-shaping, and control circuitry.

47.0106 *Major Appliance Repair.* An instructional program that prepares individuals to repair, install, and service major gas, electric, and microwave consumer appliances such as stoves, refrigerators, dryers, water heaters, washers, and dishwashers.

47.0107 *Motor Repair.* An instructional program that prepares individuals to assemble, install, test, maintain, and repair electric motors, generators, transformers, and related equipment.

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47.0108 *Small Appliance Repair.* An instructional program that prepares individuals to repair, maintain, and service small appliances such as irons, toasters, waste disposal units, vacuum cleaners, coffee makers, and dehumidifiers.

47.0109 *Vending and Recreational Machine Repair.* An instructional program that prepares individuals to install, service, adjust, and repair coin vending and recreational machines; verify by observation that machines are functioning properly; perform tests on ice-making, refrigeration, carbonation, and evaporation systems; dispensing, electrical and coin handling systems; and identify and correct malfunctions, including replacing worn or defective electrical and/or mechanical parts using hand and power tools. Includes instruction in refinishing units, transporting units to location, and connecting water or electric lines.

47.0199 *Electrical and Electronics Equipment Repair, Other.* Any instructional program in electrical and electronics equipment repair not described above.

47.02 ***Heating, Air Conditioning, and Refrigeration Mechanics.*** A group of instructional programs that prepare individuals to install, repair, and maintain the operating condition of heating, air conditioning, and refrigeration systems.

47.0201 *Heating, Air Conditioning, and Refrigeration Mechanics, General.* An instructional program that generally prepares individuals to install, repair, and maintain the operating condition of heating, air conditioning, and refrigerating systems.

47.0202 *Cooling and Refrigeration.* An instructional program that prepares individuals to install, operate, test, and service cooling and refrigeration systems. Includes instruction in various types of systems, control devices, thermic units, and refrigerators.

47.0203 *Heating and Air Conditioning.* An instructional program that prepares individuals to install, operate, test, repair, and maintain commercial and domestic heating and air conditioning systems.

47.0299 *Heating, Air Conditioning, and Refrigeration Mechanics, Other.* Any instructional program in heating, air conditioning, and refrigeration mechanics not described above.

47.03 ***Industrial Equipment Maintenance and Repair.*** A group of instructional programs that prepare individuals to operate, maintain, and repair heavy-duty equipment such as bulldozers, cranes, graders, tractors, trailers, concrete mixers, crawler-mounted shovels, draglines, and compressors.

47.0301 *Industrial Equipment Maintenance and Repair, General.* An instructional program that generally prepares individuals to operate, maintain, and repair heavy-duty equipment such as bulldozers, cranes, graders, tractors, trailers, concrete mixers, crawler-mounted shovels, draglines, and compressors.

47.0302 *Heavy Equipment Maintenance and Repair.* An instructional program that prepares individuals in the field maintenance of heavy equipment, and in general maintenance and overhaul of such equipment. Includes instruction in inspection, maintenance, and repair of tracks, wheels, brakes, operating controls, pneumatic and hydraulic systems, electrical circuitry, engines, and in techniques of welding and brazing.

47.0303 *Industrial Machinery Maintenance and Repair.* An instructional program that prepares individuals to repair and maintain industrial machinery and equipment such as cranes, pumps, engines and motors, pneumatic tools, conveyor systems, production machinery, printing machinery, marine deck machinery, and steam propulsion, refinery, and pipeline-distribution systems.

47.0304 *Mine Equipment Maintenance and Repair.* An instructional program that prepares individuals to maintain, repair, and adjust mining equipment and machinery such as continuous mines, shuttle cars, air compressors, and haulage equipment. Includes instruction in testing, adjusting, and repairing pneumatic and hydraulic systems; attaching supplemental equipment such as hoses, valves, gates, vibration equipment, and mechanical, electrical, or electronic control devices; and repairing, maintaining, and installing electric motors, switchboards, controls, fans, and starting devices.

47.0305 *Oil and Gas Drilling Equipment Operation and Maintenance.* An instructional program that prepares individuals to engage in oil- and gas-well drilling activities. Includes instruction in drilling, transmission, and pumping of liquids and gases; rigging; and maintenance of drilling equipment.

47.0399 *Industrial Equipment Maintenance and Repair, Other.* Any instructional program in industrial equipment maintenance and repair not described above.

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47.04 ***Miscellaneous Mechanics and Repairers.*** A group of instructional programs that prepare individuals for mechanic and repairer occupations other than those described under the headings of electrical and electronics equipment repair; heating, air conditioning, and refrigeration mechanics; industrial equipment maintenance and repair; stationary energy sources; and vehicle and mobile equipment mechanics and repair.

47.0401 *Electromechanical, Hydraulic, and Pneumatic Instrument Repair.* An instructional program that prepares individuals to maintain and repair various types of meters, measuring devices, and control devices such as heating and air conditioning controls; dial pressure gauges; scales and balances; electrical controlling measuring, and recording devices; and optical, aeronautical, and navigational instruments. Includes instruction in diagnosing malfunctions; disassembling, repairing, and/or replacing faulty parts; and cleaning, assembling, and adjusting instruments using special bench tools, hand tools, and other meters and standards.

47.0402 *Gunsmithing.* An instructional program that prepares individuals to repair and modify firearms according to blueprints or customer specifications, using specialized hand tools and machines. Includes instruction in installing such parts as metallic or optical sights, pistol grips, recoil pads, and decorative pieces and in reboring, rebroaching, grinding, polishing, bluing, fabricating, and finishing wooden stocks. Programs may prepare individuals to design new guns and to calculate detailed firearm specifications, such as bullet-flight arc and sight position.

47.0403 *Locksmithing and Safe Repair.* An instructional program that prepares individuals to repair and open locks, make keys, change lock and safe combinations, and install and repair safes.

47.0404 *Musical Instrument Repair.* An instructional program that prepares individuals to maintain, repair, and tune acoustic and electric musical instruments. Includes instruction in amplification systems of electric instruments, techniques of cleaning, and methods of tuning musical instruments.

47.0405 *Operation, Maintenance, and Repair of Audio-Visual Equipment.* An instructional program that prepares individuals to maintain and repair equipment designed to photogtaph illustrations and other copy that cannot be typeset, to develop negatives, and to prepare photosensitized metal plates for use in printing.

47.0406 *Shoe and Boot Repair.* An instructional program that prepares individuals to repair all types of footwear, including replacement and mending of worn or torn parts; repairing orthopedic footwear, refinishing and dyeing leather; and repairing other leather goods such as handbags, belts, and luggage.

47.0407 *Sporting Goods Equipment Repair.* An instructional program that prepares individuals to repair or replace faulty parts of sporting and athletic equipment such as fishing tackle, tennis rackets, golf equipment, and archery equipment. Includes instruction in regluing and rewinding shafts of bows and arrows; restringing tennis rackets; working with metal parts and using metal working tools; and researching specialized types of sporting and athletic equipment.

47.0408 *Watch Repair.* An instructional program that prepares individuals to make, maintain, and repair clocks, watches, chronometers, and other types of time-measuring devices by diagnosing malfunctions; disassembling, repairing, and/or replacing faulty parts; cleaning, assembling, and adjusting parts; and replacing straps, bands, crystals, crowns, and hands. Includes instruction in the use of various bench and hand tools such as lathes, staking tools, loupes, truing calipers, timing machines, pallet warmers, and other grinding, drilling, and polishing tools. Also instruction in the use of various materials such as metals, plastics, chemicals, oils, waxes, and abrasives.

47.0499 *Miscellaneous Mechanics and Repairers, Other.* Any instructional program in miscellaneous mechanics and repairers not described above.

47.05 ***Stationary Energy Sources.*** A group of instructional programs that prepare individuals to install, operate, and maintain large power sources for such purposes as generating electricity, pumping, and heating.

47.0501 *Stationary Energy Sources, General.* An instructional program that generally prepares individuals to install, operate, and maintain large power sources used for such purposes as generating electricity, pumping, and heating.

47.0502 *Conventional Electric Power Generation.* An instructional program that prepares individuals to install, operate, and maintain electric-power generating stations, and to operate and maintain gas, oil, and coal furnaces, boilers, and electric generators; steam, gas, or hydro-turbines; and diesel engines. Includes instruction in special instrumentation, controls, and emergency and safety procedures.

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47.0503 *Industrial Nuclear Energy.* An instructional program that prepares individuals to construct, operate, and maintain reactor plants and industrial X-ray equipment; and use radioisotopes in industry for production and control operations.

47.0504 *Pumping Plants.* An instructional program that prepares individuals to install, operate, and maintain electric, diesel, or gas turbine-pumping installations that handle liquids, gases, or solids for delivery through pipelines or for local use. Includes instruction in the operation and maintenance of pipeline motors, engines, turbines, instruments, and controls.

47.0599 *Stationary Energy Sources, Other.* Any instructional program in stationary energy sources not described above.

47.06 ***Vehicle and Mobile Equipment Mechanics and Repairers.*** A group of instructional programs that prepare individuals to maintain and repair aircraft; automobiles; diesel engines in vehicles such as buses, ships, trucks, railroad locomotives, and construction equipment; stationary diesel engines in electrical generators; and small engines in mobile equipment such as lawnmowers and rotary tillers.

47.0601 *Vehicle and Mobile Equipment Mechanics and Repairers, General.* An instructional program that generally prepares individuals to maintain and repair aircraft; automobiles; diesel engines in vehicles such as buses, ships, trucks, railroad locomotives, and construction equipment; stationary diesel engines in electrical generators; and small engines in mobile equipment such as lawnmowers and rotary tillers.

47.0602 *Aircraft Mechanics.* An instructional program that prepares individuals to inspect, repair, service, and overhaul all airplane parts, including engines, propellers, instruments, airframes, fuel and oil tanks, control cables, and hydraulic units. This program is designed to meet Federal Aviation Administration requirements for licensing as an airframe/power-plant mechanic.

47.0603 *Automotive Body Repair.* An instructional program that prepares individuals to repair body and fenders of automobiles. Includes instruction in body preparation for painting and finishing.

47.0604 *Automotive Mechanics.* An instructional program that prepares individuals to engage in the servicing and maintenance of all types of automobiles. Includes instruction in the diagnosis of malfunctions in and repair of engines; fuel, electrical, cooling, and brake systems; and drive train and suspension systems. Also instruction is given in the adjustment and repair of individual components and systems such as radiators, transmissions, and carburetors.

47.0605 *Diesel Engine Mechanics.* An instructional program that prepares individuals to repair diesel engines in vehicles such as buses, ships, trucks, railroad locomotives, and construction equipment, and to repair stationary diesel engines in electrical generators and related equipment. Includes instruction in diagnosing malfunctions; disassembling engines and replacing parts; and in repairing and adjusting fuel-injection systems, oil and water pumps, generators, governors, auxiliary and accompanying power units, controls, and transmissions, using a variety of tools and testing and diagnostic equipment.

47.0606 *Small Engine Repair.* An instructional program that prepares individuals to maintain and repair small internal-combustion engines used on portable power equipment such as lawnmowers, chain saws, rotary tillers, motorcycles, and snowmobiles.

47.0699 *Vehicle and Mobile Equipment Mechanics and Repairers, Other.* Any instructional program in vehicle and mobile equipment mechanics and repairers not described above.

47.99 ***Mechanics and Repairers, Other.*** A group of instructional programs in mechanics and repairers not described above.

47.9999 *Mechanics and Repairers, Other.* Any instructional program in mechanics and repairers not described above.

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48. **Precision Production.** A summary of groups of instructional programs that prepare individuals to produce precision goods and materials by hand or machine. In many instances, instructional activities are designed to cultivate an ability to interpret detailed instructions and specifications, and to produce or manufacture goods at low tolerances.

48.01 *Drafting.* A group of instructional programs that prepare individuals to plan, prepare, and interpret mechanical, architectural, structural, pneumatic, marine, electric/electronic, topographical, and other sketches; to use reproduction materials, equipment, and processes, to develop, plan, and process charts and drawings; to develop models; and to prepare reports and data sheets for writing specifications.

48.0101 *Drafting, General.* An instructional program that generally prepares individuals to plan, prepare, and interpret mechanical, architectural, structural, pneumatic, marine, electric/electronic, topographical, and other sketches; to use reproduction materials, equipment, and processes, to develop, plan, and process charts and drawings; to develop models; and to prepare reports and data sheets for writing specifications.

48.0102 *Architectural Drafting.* An instructional program that prepares individuals to support architects and/or architectural engineers in developing plans for buildings or other structures, using a variety of building materials; in creating lay outs and designs in keeping with building codes, zoning laws, ordinances, and other regulations; and in styling and planning in keeping within cost limitations and client preferences.

48.0103 *Civil/Structural Drafting.* An instructional program that prepares individuals to develop detailed construction drawings, topographical profiles, and related maps and specifications sheets for use in the planning and construction of highways, river and harbor improvements; flood-control structures, drainage structures, sanitation plants, and other structures. Includes instruction in computing the volume of excavation and fill tonnage and in preparing graphs and hauling diagrams for use in earth-moving operations.

48.0104 *Electrical/Electronics Drafting.* An instructional program that prepares individuals to develop working drawings and wiring diagrams used by construction crews and repairmen to install and prepare electrical equipment, power plants, industrial establishments, and commercial or domestic buildings. Includes instruction in drafting the wiring and schematic diagrams and lay out drawings used to manufacture, assemble, install, and repair electrical/electronic equipment such as television cameras, radio transmitters, receivers, audioamplifiers, computers, and related equipment.

48.0105 *Mechanical Drafting.* An instructional program that prepares individuals to assist engineers in the development of detailed working drawings and related specifications for mechanical devices and machinery. Includes instruction in sketching rough lay outs; drafting detailed multiview drawings; computing magnitude, direction, and point of application of tension, compression, and bending factors; compiling and analyzing text data to determine design effects on machinery in relation to temperature, pressure, speed, horsepower, and fuel consumption; and producing drawings that indicate dimensions, tolerances, fasteners, joining requirements, and other engineering data.

48.0199 *Drafting, Other.* Any instructional program in drafting not described above.

48.02 *Graphic and Printing Communications.* A group of instructional programs that prepare individuals to design and execute lay outs and illustrations for advertising displays and instructional manuals. Includes instruction in all phases of offset printing, lay out, composition, presswork and binding, flexography, lithography, photoengraving, and other graphic arts related to the printing industry.

48.0201 *Graphic and Printing Communications, General.* An instructional program that generally prepares individuals in the approaches and techniques used in the various graphic and printing communications specialties.

48.0202 *Bookbinding.* An instructional program that prepares individuals to gather pages, forms, and related materials for assembly into books or pamphlets. Includes instruction in binding and repairing books and documents.

48.0203 *Commercial Art.* An instructional program that prepares individuals to design and execute lay outs and make illustrations for advertising displays and instructional manuals. Includes instruction in the preparation of copy; lettering, poster, package, and product design; fashion illustration; silk screening; air brushing; and inks and color dynamics.

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48.0204 *Commercial Photography.* An instructional program that prepares individuals to use cameras and laboratory film-processing techniques. Includes instruction in composition and color dynamics; contact printing; enlarging, developing film; use of air brushes, cameras, meters, and other photographic equipment; portrait, commercial, and industry photography; processing microfilm, and preparing copy for printing or other graphic-arts processing.

48.0205 *Composition, Make-up, and Typesetting.* An instructional program that prepares individuals to lay out, compose, and make-up typesetting and typecast, by hand and by machine.

48.0206 *Lithography, Photography, and Platemaking.* An instructional program that prepares individuals to engage in activities concerned with lithography, lithographic photography, stripping, and related platemaking processes.

48.0207 *Photographic Laboratory and Darkroom.* An instructional program that prepares individuals to develop and print photography still – or motion picture film; control resultant prints; touchup negatives; and finish, color, restore, and copy prints.

48.0208 *Printing Press Operations.* An instructional program that prepares individuals to make ready, operate, and maintain printing processes.

48.0209 *Silk Screen Making and Printing.* An instructional program that prepares individuals to make silk screens and to perform silk screen printing operations.

48.0299 *Graphic and Printing Communications, Other.* Any instructional program in graphic and printing communications not described above.

48.03 ***Leatherworking and Upholstering.*** A group of instructional programs that prepare individuals to fabricate and repair all types of upholstery and leather goods.

48.0301 *Leatherworking and Upholstering, General.* An instructional program that generally prepares individuals to fabricate and repair all types of upholstery and leather goods.

48.0302 *Saddlemaking and Repair.* An instructional program that prepares individuals to construct and repair saddles. Includes instruction in cutting, assembling, and joining leather parts and other materials according to specification of saddle size, type, color, or grain of leather, using hand and power stitching machines; positioning covering and cushioning materials such as cotton batting, foam rubber, or mohair; attaching accessories and ornamentation; applying paint and liquid dressings for flossy finish; and cutting and stamping leather surfaces with lettering or decoration.

48.0303 *Upholstering.* An instructional program that prepares individuals to engage in all aspects of upholstering furniture, automobile seats, caskets, mattresses, and bedsprings. Includes instruction in installing, repairing, arranging, and securing springs, filler, padding, and covering material of mattresses and bedsprings; cutting, sewing, and trimming; cushion filling, tufting, and buttoning; and wood refinishing.

48.0399 *Leatherworking and Upholstering, Other.* Any instructional program in leatherworking and upholstering not described above.

48.04 ***Precision Food Production.*** A group of instructional programs that prepare individuals to perform slaughtering and butchering operations in a slaughtering and meat packing establishment, or to cut, trim, and prepare carcasses for wholesale or retail sale.

48.0401 *Precision Food Production, General.* An instructional program that prepares individuals to perform slaughtering and butchering operations in a slaughtering and meat packing establishment, or to cut, trim, and prepare carcasses for wholesale or retail sale.

48.0402 *Meatcutting.* An instructional program that prepares individuals to cut, trim, and prepare carcasses and consumer-sized portions of meat for sale in wholesale, retail, or food-service establishments. Includes instruction in the use of meat-cutting tools; identification of and cutting techniques for different cuts of meat; dressing poultry; processing fish; counter display; and refrigeration of meats, poultry, and fish.

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48.0403 *Slaughtering and Butchering.* An instructional program that prepares individuals to perform slaughtering and butchering operations in a slaughtering and meat packing establishment. Includes instruction in stunning and slaughtering; skinning, trimming, and washing; cutting standard cuts of meats such as chucks, hams, loins, plates, rounds, and shanks in preparation for marketing; cleaning and salting hides of cattle, sheep, and hogs; preparing, smoking, and wrapping meats; and making sausage.

48.0499 *Precision Food Production, Other.* Any instructional program in precision food production not described above.

48.05 ***Precision Metal Work.*** A group of instructional programs that prepare individuals to plan, manufacture, assemble, test, and repair parts, mechanisms, machines, and structures in which materials are cast, formed, shaped, molded, heat treated, cut, twisted, pressed, fushed, stamped, or otherwise worked upon.

48.0501 *Precision Metal Work, General.* An instructional program that prepares individuals to plan, manufacture, assemble, test and repair parts, mechanisms, machines, and structures in which materials are cast, formed, shaped, molded, heat treated, cut, twisted, pressed, fushed, stamped, or otherwise worked upon.

48.0502 *Foundry Work.* An instructional program that prepares individuals to engage in activities at ferrous and nonferrous foundries. Includes instruction in foundry equipment, various sands and refractories, sand and machine molding, core-making, chipping, grinding, foundry chemistry, and metallurgy.

48.0503 *Machine Tool Operation/Machine Shop.* An instructional program that prepares individuals to shape metal parts on machines such as lathes, grinders, drill presses, milling machines, and shapers. Programs may also train individuals in the use of one machine tool. Includes instruction in making computations related to work dimensions, testing feeds and speeds of machines using precision measuring instruments such as lay out tools, micrometers, and gauges; machining and heat-treating various metals; and in laying out machine parts.

48.0504 *Metal Fabrication.* An instructional program that prepares individuals to fabricate and assemble a variety of products. Includes instruction in lay out; sequence of operations; set up and operation of fabricating machines; design and construction of templates and fixtures; and the positioning; aligning, fitting, and welding of parts.

48.0505 *Metal Patternmaking.* An instructional program that prepares individuals to fit, assemble, and handfinish castings and parts in the manufacture of metal-foundry patterns, according to specifications and pattern-making methods.

48.0506 *Sheet Metal.* An instructional program that prepares individuals to lay out, fabricate, erect or install, and maintain items made of steel, copper, stainless steel, and aluminum using hand tools and machines such as cornice brakes, forming rolls, and squaring shears.

48.0507 *Tool and Die Making.* An instructional program that prepares individuals to analyze specifications and to lay out metal stock, set up and operate machine tools to fit and assemble parts for the manufacture and repair of metalworking dies, cutting tools, fixtures, gauges, and machinists' hand tools. Includes instruction in metal properties and in the applications and construction of tool and die designs.

48.0508 *Welding, Brazing, and Soldering.* An instructional program that prepares individuals to use gases and/or welding processes and to braze and solder metal parts according to diagrams, blueprints, or written specifications.

48.0599 *Precision Metal Work, Other.* Any instructional program in precision metal work not described above.

48.06 ***Precision Work, Assorted Materials.*** An instructional program that prepares individuals to produce precision goods in a variety of materials including ceramics, precious stones, metals, glass, and plastics.

48.0601 *Industrial Ceramics Manufacturing.* An instructional program that prepares individuals to engage in manufacturing activities to produce ceramic machine tools; refractories for space vehicles; and brick, glass, crockery, tile, pipe, and other articles made from clays and silicas. Includes instruction in testing physical, chemical, and heat-resisting properties of materials, and in processing, forming, and firing clays to develop ceramic products.

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48.0602 *Jewelry Design, Fabrication, and Repair.* An instructional program that prepares individuals to design, fabricate, and repair jewelry articles such as rings, broches, pendants, bracelets, and lockets. Includes instruction in modelmaking; casting, engraving, polishing, stonesetting, fitting rings, and soldering broken parts; reshaping and restyling old jewelry; and using special jeweler's hand tools and machines.

48.0603 *Optical Goods Work.* An instructional program that prepares individuals to mold and cast optical products, patterns, and prototype parts such as eyeglass lenses and contact lenses.

48.0604 *Plastics.* An instructional program that prepares individuals to mold and cast plastic parts, patterns, and prototype parts; fit, fabricate, and repair internal carvings; finish plastic parts; and assemble plastic components into products.

48.0699 *Precision Work, Assorted Materials, Other.* Any instructional program in precision work, assorted materials not described above.

48.07 ***Woodworking.*** A group of instructional programs that prepare individuals to lay out and shape stock; assemble wooden articles or subassemblies; mark, bind, saw, carve, and sand wooden products; repair wooden articles, and use a variety of hand and power tools.

48.0701 *Woodworking, General.* An instructional program that generally prepares individuals to lay out and shape stock; assemble wooden articles or subassemblies; mark, bind, saw, carve, and sand wooden products; repair wooden articles; and use a variety of hand and power tools.

48.0702 *Furniture Making.* An instructional program that prepares individuals to assemble and finish wood furniture. Includes instruction in preparing freehand sketches; fastening wooden parts with glue; reinforcing joints with dowels, screws, staples, or nails using power screwdrivers, staple guns, or hammers; and finishing and/or refinishing new, used, damaged, or worn furniture according to specifications.

48.0703 *Millwork and Cabinet Making.* An instructional program that prepares individuals to engage in the mass production of such articles as window frames, moldings, trim and panels; and such products as store fixtures, kitchen cabinets, and office equipment. Includes instruction in cutting, shaping, assembling, and refinishing articles; installing hinges, catches, drawer pulls, and other hardware; and planning and drafting lay outs.

48.0799 *Woodworking, Other.* Any instructional program in woodworking not described above.

48.99 ***Precision Production, Other.*** A group of instructional programs in precision production not described above.

48.9999 *Precision Production, Other.* Any instructional program in precision production not described above.

49. **Transportation and Material Moving.** A summary of groups of instructional programs that prepare individuals to operate and control equipment used to facilitate the movement of people or materials.

49.01 ***Air Transportation.*** A group of instructional programs that prepare individuals to engage in activities concerned with the inflight operation of commercial and private airplanes, including piloting, navigating, and providing passenger services and general ground support.

49.0101 *Air Transportation, General.* An instructional program that generally prepares individuals to engage in activities concerned with the inflight operation of commercial and private airplanes, including piloting, navigating, and providing passenger services and general ground support.

49.0102 *Airplane Piloting and Navigation.* An instructional program that prepares individuals to pilot aircraft and assume the eventual command responsibility of carrying passengers and freight. Includes instruction in aircraft structure, behavior, operation, and controls; radio communications, meterology; navigation; airways safety and traffic regulations; and governmental rules and regulations pertaining to piloting aircraft. Completion of this program prepares individuals to take Federal Aviation Administration (FAA) examinations for a commercial pilot's certificate.

49.0103 *Aviation Computer Technology.* An instructional program that prepares individuals to assist computer operators concerned with the tracking and controlling of aircraft.

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49.0104 *Aviation Management.* An instructional program that prepares individuals in the nature and application of management methods and techniques related to the aviation industry.

49.0105 *Air Traffic Control.* An instructional program that prepares individuals in air-traffic management and control, usually with additional training at the FAA Flight Control Center in a cooperative education program. Includes instruction in flight control; the use of radar and electronic scanning devices; plotting of flights; radio communication; interpretation of weather conditions affecting flights; flight instrumentation used by pilots; and maintenance of flight-control center or control-tower log books and reports.

49.0106 *Flight Attendants.* An instructional program that prepares individuals to perform a variety of personal services conducive to the safety and comfort of airline passengers during flight, including verifying tickets, explaining the use of safety equipment, and serving previously prepared meals and beverages.

49.0199 *Air Transportation, Other.* Any instructional program in air transportation not described above.

49.02 ***Vehicle and Equipment Operation.*** A group of instructional programs that prepare individuals to drive trucks and buses, and to operate construction, material handling, and mining equipment.

49.0201 *Vehicle and Equipment Operation, General.* An instructional program that generally prepares individuals to drive trucks and buses, and to operate construction, material handling, and mining equipment.

49.0202 *Construction Equipment Operation.* An instructional program that prepares individuals to operate and maintain a variety of heavy equipment, such as a crawler tractor, motor graders and scrapers, and shovels, including dragline, hoe, and cranes. Includes instruction in digging, ditching, sloping, stripping, grading, backfilling, clearing, and excavating.

49.0203 *Material Handling.* An instructional program that prepares individuals to receive, store, ship, transport, control, and distribute products and materials; keep records of transactions; and properly use hand tools and power equipment such as bars, cutters, hand trucks, conveyors, and industrial trucks to move materials.

49.0204 *Mining Equipment Operation.* An instructional program that prepares individuals to engage in mining operation activities; operate excavating machinery and shuttle cars; test for and identify gases in the mine; and maintain testing equipment. Includes instruction in first aid; ventilation and dust control in the mine; techniques of roofing, ribbing, and setting crossbars; escape procedures; and maintenance of penumatic and hydraulic systems.

49.0205 *Truck and Bus Driving.* An instructional program that prepares individuals to drive trucks and buses. Includes instruction in operating gas, diesel, or electrically-powered vehicles; loading and unloading cargo or passengers; reporting delays or accidents on the road; verifying load against shipping papers; arranging transportation for personnel; and keeping records of receipts and fares.

49.0299 *Vehicle and Equipment Operation, Other.* Any instructional program in vehicle and equipment operation not described above.

49.03 ***Water Transportation.*** A group of instructional programs that prepare individuals to perform tasks on fresh-water and sea-going ships, tugboats, barges, floating structures, and related harbor and dock machinery. Includes instruction in firefighting; lifeboat work; swimming; fiber and wire rope handling and splicing; hull maintenance and painting; cargo-handling gear and ground tackle; maintenance, operation, and repair of main engines and auxiliary steam, refrigeration, water, and electrical systems; and watchkeeping, store-keeping, and food preparation.

49.0301 *Water Transportation, General.* An instructional program that generally prepares individuals to perform tasks on fresh-water and sea-going ships, tugboats, barges, floating structures, and related harbor and dock machinery. Includes instruction in firefighting; lifeboat work; swimming; fiber and wire rope handling and splicing; hull maintenance, and painting; cargo-handling, gear and ground tackle; maintenance, operation, and repair of main engines and auxiliary steam, refrigeration, water, and electrical systems; and watchkeeping, store-keeping, and food preparation.

49.0302 *Barge and Boat Operation.* An instructional program that prepares individuals to direct the operation and navigation of barges, dredges, non-cable ferry boats, and tugboats to transport people and materials; to tow other marine vessels; and to dredge waterways.

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49.0303 *Commercial Fishing Operation.* An instructional program that prepares individuals to support the captain of a fishing boat or perform as an officer in charge of various types of boats for commercial or recreational purposes. Includes instruction in operation of boats, fishing gear, navigational instruments, electronic fish-finding and depth-measuring devices, and specialized gear required for catching, identifying, sorting, and storing fish or other marine products; safety procedures; marine law and tradition; maintenance of ships logs and report preparation; and effective functioning on board all types of boats. Programs provide preparation for licensure by the Coast Guard.

49.0304 *Deep Water Diving and Life Support Systems.* An instructional program that prepares individuals to deep-water dive or serve as attendants on board boats from which diving is done. Includes instruction in the use of diving bells and other specialized gear; problems and hazards of diving; mixing and delivering oxygen and other life-support gases; communication systems; decompression systems; and limits of depth of diving; deep underwater salvage; exploration, rescue, and photography; and installation of underwater mechanical systems and their maintenance, repair, or demolition.

49.0305 *Marina Operations.* An instructional program that prepares individuals to manage and operate commercial marinas. Includes instruction in accommodating, docking, servicing, and provisioning recreational or small commercial fishing or other boats; designing, installing, and maintaining docks, wharfs, and related equipment; ensuring sanitation of facilities; fueling and preventing fires; protecting wharf and docking facilities from biological or other destructive agents; maintaining facilities and manning the establishment to serve the public; and basic marine laws and legal responsibilities.

49.0306 *Marine Maintenance.* An instructional program that prepares individuals to repair outboard and inboard engines; test, maintain, and repair steering devices and electrical systems, repair metal, wood, and fiberglass; fabricate and maintain sail; and repair and balance propellers.

49.0307 *Merchant Marine Officers.* An instructional program that prepares individuals to command or assist in the command of a merchant ship.

49.0308 *Sailors and Deckhands.* An instructional program that prepares individuals to use and maintain lines, nets, navigational aids, radios, and electronic equipment; safely handle boats; maintain docks, surfaces, engines, and power plants; and other ocean skills that promote safety and survival at sea.

49.0399 *Water Transportation, Other.* Any instructional program in water transportation not described above.

49.99 ***Transportation and Material Moving, Other.*** A group of instructional programs in transportation and material moving not described above.

49.9999 *Transportation and Material Moving, Other.* Any instructional program in transportation and material moving not described above.

50. Visual and Performing Arts. A summary of groups of instructional programs that describe the creation and perception of auditory, kinesthetic, and visual phenomena which express ideas and emotions in various forms, subject to aesthetic criteria.

50.01 ***Visual and Performing Arts, General.*** A group of instructional programs (see 50.0101).

50.0101 *Visual and Performing Arts, General.* An instructional program that generally describes the historic development, aesthetic qualities, and creative processes of two or more of the visual and performing arts.

50.02 ***Crafts.*** A group of instructional programs that describe how to increase one's skills to fashion objects in a specialized area of handwork.

50.0201 *Crafts, General.* An instructional program that generally describes how to increase one's skills to fashion objects in a specialized area of handwork.

50.0202 *Ceramics.* An instructional program that describes how to increase one's skills to fashion objects of clay and similar materials treated by firing.

50.0203 *Enameling.* An instructional program that describes how to increase one's skills to apply glassy substances by fusion to the surface of metal, pottery, etc., for decorative or ornamental purposes.

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50.0204 *Fiber/Textiles/Weaving.* An instructional program that describes how to increase one's skills to interlace fibrous material (threads, yarns, etc.) into fabrics or materials having decorative or ornamental purposes.

50.0205 *Glass.* An instructional program that describes how to increase one's skills to form or shape a mass of molten or heat-softened glass into functional and decorative items.

50.0206 *Metal/Jewelry.* An instructional program that describes how to increase one's skills to fashion articles of personal adornment from gems and precious metals.

50.0299 *Crafts, Other.* Any instructional program in crafts not described above.

50.03 ***Dance.*** A group of instructional programs (see 50.0301).

50.0301 *Dance.* An instructional program that describes the performance and choreography of various kinds of dances, including but not limited to ballet, modern, jazz, ethnic, and folk dance.

50.04 ***Design.*** A group of instructional programs that describe the theories, techniques, and creative processes for more effectively performing the function of communicating feelings, ideas, and information through use of materials and media to create two- or three-dimensional visual affects.

50.0401 *Design, General.* An instructional program that generally describes the theories, aesthetic qualities, and processes of two or more design specialties.

- - - - - - - *Environmental Design.* (see 04.0401).

- - - - - - - *Fashion Design.* (see 19.0902).

50.0402 *Graphic Design.* An instructional program that describes the theories, aesthetic qualities, and creative processes for more effectively communicating ideas, information, and feelings in printed form with attention being given to both aesthetic and functional criteria.

50.0403 *Illustration Design.* An instructional program that describes the techniques for conveying information through visual imagery and pictorial representation.

50.0404 *Industrial Design.* An instructional program that describes the techniques of designing consumer or commercial products and packaging to maximize aesthetic appeal while not compromising utilitarian value.

- - - - - - - *Interior Design.* (see 04.0501).

- - - - - - - *Medical Illustrating.* (see 17.0504).

50.0405 *Theatre Design.* An instructional program that describes the techniques of communicating information, ideas, moods, and feelings through set design and costuming with attention to both function and aesthetics.

50.0499 *Design, Other.* Any instructional program in design not described above.

50.05 ***Dramatic Arts.*** A group of instructional programs (see 50.0501).

50.0501 *Dramatic Arts.* An instructional program that describes the development, theory, and processes of creating live performances through human expressive modalities.

50.06 ***Film Arts.*** A group of instructional programs that describe the development, theories, processes, and techniques of photographic images as a means of artistic expression.

50.0601 *Film Arts, General.* An instructional program that generally describes the development, theories, processes, and techniques of two or more of the film arts.

50.0602 *Cinematography/Film.* An instructional program that describes the historic development, aesthetic qualities, theories, techniques, and creative processes of the moving image as a means of artistic expression using film as the medium.

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50.0603 *Film Animation.* An instructional program that describes the techniques and creative processes for creating motion pictures consisting of a series of drawings, each slightly different from the preceding one so that, when filmed and projected, the figures appear to move.

50.0604 *Holography.* An instructional program that describes the theories, techniques, and creative processes for making holograms (three dimensional pictures made on a photographic film or plate without the use of a camera).

50.0605 *Photography.* An instructional program that describes the historic development, aesthetic qualities, theories, techniques, and creative processes of producing images on photographic film or plates.

50.0606 *Video.* An instructional program that describes the aesthetic qualities, theories, techniques, and creative processes of the moving image as a means of artistic expression using videotape as the medium.

50.0699 *Film Arts, Other.* Any instructional program in film arts not described above.

50.07 ***Fine Arts.*** A group of instructional programs that describe the organization of materials and media for two- or three-dimensional visual affects that communicate ideas and express emotion and are considered primarily in relation to aesthetic criteria of judgments of beauty or meaningfulness.

50.0701 *Fine Arts, General.* An instructional program that generally describes the historic development, aesthetic qualities and creative processes of two or more of the fine arts.

50.0702 *Art Conservation.* An instructional program that describes the techniques and processes for protecting objects of art (e.g., paintings, sculpture) from deterioration or decay and for restoring such objects that have deteriorated or been damaged.

- - - - - - - *Art Education.* (see 13.1302).

50.0703 *Art History and Appreciation.* An instructional program that describes art and its relationship to concurrent events, the evaluation of artistic styles, the lives of artists, and the role of art in human affairs, including contemporary times.

- - - - - - - *Art Therapy.* (see 17.0801).

50.0704 *Arts Management.* An instructional program that prepares individuals to apply economic and business principles to the management and operation of profit and nonprofit organizations that specialize in the visual or performing arts.

50.0705 *Drawing.* An instructional program that describes the aesthetic qualities, techniques, and creative processes for communicating ideas, feelings, and inner vision through representation by lines; a delineation of form without reference to color.

50.0706 *Intermedia.* An instructional program that describes the aesthetic qualities, techniques, and creative processes for expressing emotions, ideas, or inner visions in either two or three dimensions using a variety of materials (medium) simultaneously.

50.0707 *Kinetics.* An instructional program that describes the aesthetic qualities, techniques, and creative processes for expressing emotions, ideas, or inner visions using materials (including light) in motion as the medium.

50.0708 *Painting.* An instructional program that describes the aesthetic qualities, techniques, and creative processes for expressing emotions or communicating ideas through application of paints to canvases or other materials.

50.0709 *Sculpture.* An instructional program that describes the aesthetic qualities, techniques, and creative processes for creating work of art in three dimension through carving, molding, welding or other procedures.

50.0799 *Fine Arts, Other.* Any instructional program in fine arts not described above.

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50.08 ***Graphic Arts Technology.*** An instructional program (see 50.0801).

50.0801 *Graphic Arts Technology.* An instructional program that prepares individuals in all phases of hot-type, cold-type, and computer-type setting, including typographical lay out, composition, press work, binding, lithography, photo-engraving, and other graphic arts related to the printing industry. Includes instruction in drawing and lettering; theory and science relating to camera work and photography, typographical lay outs, and machine-type setting; silk (or other) screen printing, multicolor composition and printing; ink and color preparation paper and other printing materials; printing-press operation, servicing, and elementary maintenance; cost estimation and the production, inspection, quality control, handling, binding, packaging, and storage of printing materials.

50.09 ***Music.*** A group of instructional programs that describe the art and science of combining sounds of various timbre in harmonic, rhythmic, or melodic forms which are artistically expressive.

50.0901 *Music, General.* An instructional program that generally describes music history and appreciation, music performance, and music theory and composition.

50.0902 *Music History and Appreciation.* An instructional program that describes music and its relationship to concurrent events, the evolution of musical styles, the lives of musicians, and the role of music in human affairs, including contemporary times.

50.0903 *Music Performance.* An instructional program that describes the applied study of and performance on musical instruments, or the applied study of voice and vocal performance, either solo or in ensemble.

50.0904 *Music Theory and Composition.* An instructional program that describes the principles, forms, and foundations of music as well as the techniques of creating and arranging tonal combinations and sequences.

50.0999 *Music, Other.* Any instructional program in music not described above.

50.99 ***Visual and Performing Arts, Other.*** A group of instructional programs in visual and performing arts not described above.

50.9999 *Visual and Performing Arts, Other.* Any instructional program in visual and performing arts not described above.

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Appendixes

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Appendix A

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Chismore, W. Dale, and Hill, Quentin M. *A Classification of Educational Subject Matter.* State Educational Records and Reports Series, Handbook XI, U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, NCES 78-112. Washington D.C.: U.S. Government Printing Office, 1978.

Collier, Douglas J. *Higher Education Finance Manual.* U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, NCES 75-118. Washington D.C.: U.S. Government Printing Office, 1975.

Harris, Yeuell Y. *Community Information in Education.* State Educational Records and Reports Series, Handbook VIII, U.S. Department of Education, National Center for Education Statistics, NCES 79-407. Washington D.C.: U.S. Government Printing Office, 1979.

Harris, Yeuell Y., and Seibert, Ivan N. *The State Education Agency.* State Educational Records and Reports Series, Handbook VII, U.S. Department of Health, Education, and Welfare, Office of Education, OE-23054. Washington D.C.: U.S. Government Printing Office, 1971.

Huff, Robert A., and Chandler, Marjorie O. *A Taxonomy of Instructional Programs in Higher Education.* U.S. Department of Health, Education, and Welfare, Office of Education, OE-50064. Washington D.C.: U.S. Government Printing Office, 1970.

Jones, Dennis P., and Drews, Theodore H. *A Manual for Budgeting and Accounting for Manpower Resources in Postsecondary Education.* U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, NCES 77-343. Washington D.C.: U.S. Government Printing Office, 1977.

Putnam, John F. *Student/Pupil Accounting: Standard Terminology and Guide for Managing Student Data in Elementary and Secondary Schools, Community/Junior Colleges, and Adult Education.* State Educational Records and Reports Series, Handbook V, Revised, U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, NCES 76-329. Washington D.C.: U.S. Government Printing Office, 1974.

Putnam, John F. *Postsecondary Student Terminology.* U.S. Department of Education, National Center for Education Statistics, NCES 79-409. Washington D.C.: U.S. Government Printing Office, forthcoming.

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Roberts, Charles T. *Staff Accounting for Local and State School Systems: Standard Terminology, Classifications, Operating Procedures and Reporting.* State Educational Records and Reports Series, Handbook IV, Revised, U.S. Department of Health, Education, and Welfare, Office of Education, OE 74-314. Washington D.C.: U.S. Government Printing Office, 1974.

Roberts, Charles T., and Lichtenberger, Allan R. *Financial Accounting: Classifications and Standard Terminology for Local and State School Systems.* State Educational Records and Reports Series, Handbook II, Revised, U.S. Department of Health, Education, and Welfare, Office of Education, OE 73-11800. Washington D.C.: U.S. Government Printing Office, 1973.

Romney, Leonard C. *Facilities Inventory and Classification Manual.* U.S. Department of Health, Education, and Welfare, Office of Education, OE 74-11424. Washington D.C.: U.S. Government Printing Office, 1974.

Seibert, Ivan N. *Education Property: A Handbook of Standard Terminology and A Guide for Classifying Information About Education Property.* State Educational Records and Reports Series, Handbook III, Revised, U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, NCES 78-400. Washington D.C.: U.S. Government Printing Office, 1977.

Seibert, Ivan N. *Educational Technology: A Handbook of Standard Terminology and a Guide for Recording and Reporting Information About Educational Technology.* State Educational Records and Reports Series, Handbook X, U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, NCES 76-321. Washington D.C.: U.S. Government Printing Office, 1975.

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Crosswalk Between the HEGIS Taxonomy and the New Classification

HEGIS Taxonomy *Conventional Academic Subdivisions of Knowledge and Training*		New Classification	
0100	Agriculture and Natural Resources	01.	Agribusiness and Agricultural Production
		02.	Agricultural Sciences
		03.	Renewable Natural Resources
0101	Agriculture, general	02.0101	Agricultural Sciences, General
0102	Agronomy (field crops, and crop management)	02.0402	Agronomy
0103	Soils science (management and conservation)	02.0501	Soil Sciences, General
		02.0502	Soil Chemistry
		02.0503	Soil Conservation
		02.0504	Soil Management and Fertility
		02.0505	Soil Microbiology
		02.0506	Soil Physics
		02.0599	Soil Sciences, Other
0104	Animal science (husbandry)	02.0201	Animal Sciences, General
0105	Dairy science (husbandry)	02.0206	Dairy
0106	Poultry science	02.0209	Poultry
0107	Fish, game, and wildlife management	01.0305	Game Farm Management
		03.0301	Fishing and Fisheries, General
		03.0601	Wildlife Management
0108	Horticulture (fruit and vegetable production)	02.0403	Horticulture Science
0109	Ornamental horticulture (floriculture, nursery science)	02.0404	Ornamental Horticulture
0110	Agricultural and farm management	01.0101	Agricultural Business and Management, General
0111	Agricultural economics	01.0103	Agricultural Economics
0112	Agricultural business	01.0102	Agricultural Business
0113	Food science and technology	02.0301	Food Sciences, General
		02.0306	Food Technology
0114	Forestry	03.0501	Forestry and Related Sciences, General
		03.0502	Forestry Science
0115	Natural resources management	03.0101	Renewable Natural Resources, General
0116	Agriculture and forestry technologies (baccalaureate and higher programs)	03.0404	Forest Products Processing Technology
0117	Range management	02.0409	Range Management
0199	Other, specify	01.9999	Agribusiness and Agricultural Production, Other
		02.0202	Animal Breeding and Genetics
		02.0203	Animal Health
		02.0204	Animal Nutrition
		02.0205	Animal Physiology
		02.0207	Fisheries Science
		02.0208	Livestock
		02.0299	Animal Sciences, Other
		02.0302	Dairy Processing
		02.0303	Food Distribution
		02.0304	Food Engineering
		02.0305	Food Packaging

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HEGIS Taxonomy *Conventional Academic Subdivisions of Knowledge and Training*		New Classification	
0199	Other, specify (Continued)	02.0399	Food Sciences, Other
		02.0401	Plant Sciences, General
		02.0405	Plant Breeding and Genetics
		02.0406	Plant Pathology (Applied)
		02.0407	Plant Physiology
		02.0408	Plant Protection (Pest Management)
		02.0410	Turf Management Science
		02.0499	Plant Sciences, Other
		02.9999	Agricultural Sciences, Other
		03.0503	Forest Biology
		03.0504	Forest Engineering
		03.0505	Forest Hydrology
		03.0506	Forest Management
		03.0507	Forest Mensuration
		03.0508	Urban Forestry
		03.0509	Wood Science
		03.0599	Forestry and Related Sciences, Other
		03.9999	Renewable Natural Resources, Other
0200	Architecture and Environmental Design	04.	Architecture and Environmental Design
0201	Environmental design, general	04.0401	Environmental Design
0202	Architecture	04.0201	Architecture
0203	Interior design	04.0501	Interior Design
0204	Landscape architecture	04.0601	Landscape Architecture
0205	Urban architecture	04.0701	Urban Design
0206	City, community, and regional planning	04.0301	City, Community, and Regional Planning
0299	Other, specify	04.0101	Architecture and Environmental Design, General
		04.9999	Architecture and Environmental Design, Other
0300	Area Studies	05.	Area and Ethnic Studies
0301	Asian studies, general	05.0103	Asian Studies, General
0302	East Asian studies	05.0104	East Asian Studies
0303	South Asian (India, etc.) studies	05.0112	South Asian Studies
0304	Southeast Asian studies	05.0113	Southeast Asian Studies
0305	African studies	05.0101	African Studies
0306	Islamic studies	05.0204	Islamic Studies
0307	Russian and Slavic studies	05.0110	Russian and Slavic Studies
0308	Latin American studies	05.0107	Latin American Studies
0309	Middle Eastern studies	05.0108	Middle Eastern Studies
0310	European studies, general	05.0106	European Studies, General
0311	Eastern European studies	05.0105	Eastern European Studies
0312	West European studies	05.0114	Western European Studies
0313	American studies	05.0102	American Studies
0314	Pacific area studies	05.0109	Pacific Area Studies
0399	Other, specify	05.0111	Scandinavian Studies
		05.0199	Area Studies, Other
		05.0205	Jewish Studies
		05.0299	Ethnic Studies, Other

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HEGIS Taxonomy *Conventional Academic Subdivisions of Knowledge and Training*		New Classification	
0400	Biological Sciences	26.	Life Sciences
0401	Biology, general	26.0101	Biology, General
0402	Botany, general	26.0301	Botany, General
0403	Bacteriology	26.0302	Bacteriology
0404	Plant pathology	26.0305	Plant Pathology
0405	Plant pharmacology	26.0306	Plant Pharmacology
0406	Plant physiology	26.0307	Plant Physiology
0407	Zoology, general	26.0701	Zoology, General
0408	Pathology, human and animal	26.0704	Pathology, Human and Animal
0409	Pharmacology, human and animal	26.0705	Pharmacology, Human and Animal
0410	Physiology, human and animal	26.0706	Physiology, Human and Animal
0411	Microbiology	26.0501	Microbiology
0412	Anatomy	26.0601	Anatomy
0413	Histology	26.0606	Histology
0414	Biochemistry	26.0201	Biochemistry and Biophysics
0415	Biophysics	26.0201	Biochemistry and Biophysics
0416	Molecular biology	26.0402	Molecular Biology
0417	Cell biology (cytology, cell physiology)	26.0401	Cell Biology
0418	Marine biology	26.0607	Marine Biology
0419	Biometrics and biostatistics	26.0602	Biometrics and Biostatistics
0420	Ecology	26.0603	Ecology
0421	Entomology	26.0702	Entomology
0422	Genetics	26.0703	Genetics, Human and Animal
0423	Radiobiology	26.0611	Radiobiology
0424	Nutrition, scientific (excludes nutrition in home economics and dietetics)	26.0609	Nutritional Sciences
0425	Neurosciences	26.0608	Neurosciences
0426	Toxicology	26.0612	Toxicology
0427	Embryology	26.0604	Embryology
0499	Other, specify	26.0303	Mycology
		26.0304	Plant Genetics
		26.0399	Botany, Other
		26.0499	Cell and Molecular Biology, Other
		26.0605	Endocrinology
		26.0607	Marine Biology
		26.0610	Parasitology
		26.0699	Miscellaneous Specialized Areas, Life Sciences, Other
		26.0799	Zoology, Other
		26.9999	Life Sciences, Other
0500	Business and Management	06.	Business and Management
0501	Business and commerce, general	06.0101	Business and Management, General
0502	Accounting	06.0201	Accounting
0503	Business statistics	06.1301	Business Statistics
0504	Banking and finance	06.0301	Banking and Finance
0505	Investments and securities	06.1001	Investments and Securities
0506	Business management and administration	06.0401	Business Administration and Management, General
0507	Operations research	06.1302	Operations Research (Quantitative Methods)
0508	Hotel and restaurant management	06.0701	Hotel/Motel Management
		06.0704	Restaurant Management
0509	Marketing and purchasing	06.0402	Contract Management and Procurement/Purchasing
		06.1401	Marketing Management

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HEGIS Taxonomy *Conventional Academic Subdivisions of Knowledge and Training*		New Classification	
0510	Transportation and public utilities	06.0705	Transporation Management
		44.0602	Public Transporation
		44.0603	Public Utilities
0511	Real Estate	06.1701	Real Estate, General
		06.1702	Commercial Property
		06.1703	Property Management
		06.1704	Real Estate Appraisal
		06.1705	Real Estate Finance
		06.1706	Real Estate Law
		06.1707	Residential Property
		06.1799	Real Estate, Other
0512	Insurance	06.0801	Insurance and Risk Management
0513	International business	06.0901	International Business Management
0514	Secretarial studies (baccalaureate and higher programs)	07.0601	Secretarial and Related Programs, General
0515	Personnel management	06.1601	Personnel Management
0516	Labor and industrial relations	06.1101	Labor/Industrial Relations
0517	Business economics	06.0501	Business Economics
0599	Other, specify	06.0403	Product Management
		06.0404	Systems Efficiency Analysis
		06.0499	Business Administration and Management, Other
		06.0601	Human Resources Development
		06.0702	Recreational Enterprises Management
		06.0703	Resort Management
		06.0799	Institutional Management, Other
		06.1201	Management Information Systems
		06.1399	Management Science, Other
		06.1402	Marketing Research
		06.1499	Marketing Management and Research, Other
		06.1501	Organizational Behavior
		06.1801	Small Business Management
		06.1802	Small Business Ownership
		06.1899	Small Business Management and Ownership, Other
		06.1901	Taxation
		06.2001	Trade and Industrial Supervision and Management
		06.9999	Business and Management, Other
0600	Communications	09.	Communications
0601	Communications, general	09.0101	Communications, General
0602	Journalism (printed media)	09.0401	Journalism (Mass Communications)
0603	Radio/television	09.0601	Radio/Television News Broadcast
		09.0701	Radio/Television, General
0604	Advertising	09.0201	Advertising
0605	Communication media (use of videotape, films, etc., oriented specifically toward radio/television)	10.0104	Radio and Television Production and Broadcasting Technology
0699	Other, specify	09.0301	Communications Research
		09.0501	Public Relations
		09.9999	Communications, Other

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HEGIS Taxonomy *Conventional Academic Subdivisions of Knowledge and Training*		New Classification	
0700	Computer and Information Sciences	11.	Computer and Information Sciences
0701	Computer and information sciences, general	11.0101	Computer and Information Sciences, General
0702	Information sciences and systems	11.0401	Information Sciences and Systems
0703	Data processing	11.0301	Data Processing
0704	Computer programming	11.0201	Computer Programming
0705	Systems analysis	11.0501	Systems Analysis
0799	Other, specify	11.9999	Computer and Information Sciences, Other
0800	Education	13.	Education
0801	Education, general	13.0101	Education, General
0802	Elementary education, general	13.1202	Elementary Education
0803	Secondary education, general	13.1205	Secondary Education
0804	Junior high school education	13.1203	Junion High Education
0805	Higher education, general	13.0406	Higher Education Administration
		13.0606	Higher Education Research
0806	Junior and community college education	13.0407	Community College Education Administration
0807	Adult and continuing education	13.0403	Adult and Continuing Education Administration
		13.0602	Adult and Continuing Education Research
		13.1201	Adult and Continuing Education
0808	Special education, general	13.1001	Special Education, General
0809	Administration of special education	13.0402	Administration of Special Education
0810	Education of the mentally retarded	13.1006	Education of the Mentally Handicapped
0811	Education of the gifted	13.1004	Education of the Gifted and Talented
0812	Education of the deaf	13.1003	Education of the Deaf and Hearing Impaired
0813	Education of the culturally disadvantaged	13.1002	Education of the Culturally Disadvantaged
0814	Education of the visually handicapped	13.1009	Education of the Visually Handicapped
0815	Speech correction	13.1012	Speech Correction
0816	Education of the emotionally disturbed	13.1005	Education of the Emotionally Handicapped
0817	Remedial education	13.1010	Remedial Education
0818	Special learning disabilities	13.1011	Specific Learning Disabilities
0819	Education of the physically handicapped	13.1008	Education of the Physically Handicapped
0820	Education of the multiple handicapped	13.1007	Education of the Multiple Handicapped
0821	Social foundations (history and philosophy of education)	13.0901	Social Foundations
0822	Educational psychology (include learning theory)	13.0801	School Psychology
0823	Pre-elementary education (kindergarten)	13.1204	Pre-Elementary Education
0824	Educational statistics and research	13.0603	Educational Statistics and Research
0825	Educational testing, evaluation and measurement	13.0604	Educational Testing, Evaluation, and Measurement
0826	Student personnel (counseling and guidance)	13.1101	Student Counseling and Personnel Services
0827	Educational administration	13.0401	Education Administration, General
0828	Educational supervision	13.0404	Educational Supervision
0829	Curriculum and instruction	13.0301	Curriculum and Instruction
0830	Reading education (methodology and theory)	13.1315	Reading Education
0831	Art education (methodology and theory)	13.1302	Art Education
0832	Music education (methodology and theory)	13.1312	Music Education
0833	Mathematics education (methodology and theory)	13.1311	Mathematics Education
0834	Science education (methodology and theory)	13.1316	Science Education
0835	Physical education	13.1314	Physical Education
0836	Driver and safety education	13.1304	Driver and Safety Education
0837	Health education (include family life education)	13.1307	Health Education
0838	Business, commerce, and distributive education	13.1303	Business Education
		13.1310	Marketing and Distributive Education

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HEGIS Taxonomy *Conventional Academic Subdivisions of Knowledge and Training*		New Classification	
0839	Industrial arts, vocational, and technical education	13.1309	Industrial Arts Education
		13.1319	Technical Education
		13.1320	Trade and Industrial Education
0899	Other, specify	13.0201	Bilingual/Bicultural Education
		13.0405	Elementary and Secondary Education Administration
		13.0499	Education Administration, Other
		13.0501	Educational Media
		13.0601	Evaluation and Research, General
		13.0605	Elementary and Secondary Research
		13.0699	Evaluation and Research, Other
		13.0701	International and Comparative Education
		13.1099	Special Education, Other
		13.1299	Teacher, Education, General Programs, Other
		13.1301	Agricultural Education
		13.1305	English Education
		13.1306	Foreign Languages Education
		13.1308	Home Economics Education
		13.1313	Nutritional Education
		13.1317	Social Science Education
		13.1318	Social Studies Education
		13.1399	Teacher Education, Specific Subject Areas, Other
		13.1401	Teaching English as a Second Language/Foreign Language
		13.9999	Education, Other
0900	Engineering	14.	Engineering
0901	Engineering, general	14.0101	Engineering, General
0902	Aerospace, aeronautical and astronautical engineering	14.0201	Aerospace, Aeronautical, and Astronautical Engineering
0903	Agricultural engineering	14.0301	Agricultural Engineering
0904	Architectural engineering	14.0401	Architectural Engineering
0905	Bioengineering and biomedical engineering	14.0501	Bioengineering and Biomedical Engineering
0906	Chemical engineering (include petroleum refining)	14.0701	Chemical Engineering
0907	Petroleum engineering (exclude petroleum refining)	14.2501	Petroleum Engineering
0908	Civil, construction, and transportation engineering	14.0801	Civil Engineering
0909	Electrical, electronics, and communications engineering	14.1001	Electrical, Electronics, and Communications Engineering
0910	Mechanical engineering	14.1901	Mechanical Engineering
0911	Geological engineering	14.1501	Geological Engineering
0912	Geophysical engineering	14.1601	Geophysical Engineering
0913	Industrial and management engineering	14.1701	Industrial Engineering
0914	Metallurgical engineering	14.2001	Metallurgical Engineering
0915	Materials engineering	14.1801	Materials Engineering
0916	Ceramic engineering	14.0601	Ceramic Engineering
0917	Textile engineering	14.2801	Textile Engineering
0918	Mining and mineral engineering	14.2101	Mining and Mineral Engineering
0919	Engineering physics	14.1201	Engineering Physics
0920	Nuclear engineering	14.2301	Nuclear Engineering
0921	Engineering mechanics	14.1101	Engineering Mechanics
0922	Environmental and sanitary engineering	14.1401	Environmental Health Engineering
0923	Naval architectural and marine engineering	14.2201	Naval Architecture and Marine Engineering
0924	Ocean engineering	14.2401	Ocean Engineering

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HEGIS Taxonomy *Conventional Academic Subdivisions of Knowledge and Training*		New Classification	
0925	Engineering technologies (baccalaureate and higher programs)	15.	Engineering and Engineeering Related Technologies
0999	Other, specify	14.0901	Computer Engineering
		14.1301	Engineering Science
		14.2601	Surveying and Mapping Sciences
		14.2602	Cartography
		14.2701	Systems Engineering
		14.9999	Engineering, Other
1000	Fine and Applied Arts	50.	Visual and Performing Arts
1001	Fine arts, general	50.0101	Visual and Performing Arts, General
1002	Art (painting, drawing, sculpture)	50.0705	Drawing
		50.0708	Painting
		50.0709	Sculpture
1003	Art history and appreciation	50.0703	Art History and Appreciation
1004	Music (performing, composition, theory)	50.0903	Music Performance
		50.0904	Music Theory and Composition
1005	Music (liberal arts program)	50.0901	Music, General
1006	Music history and appreciation (musicology)	50.0902	Music History and Appreciation
1007	Dramatic arts	50.0501	Dramatic Arts
1008	Dance	50.0301	Dance
1009	Applied design (ceramics, weaving, textile design, fashion design, jewelry, metalsmithing, interior decoration, commercial art)	50.0201	Crafts, General
		50.0202	Ceramics
		50.0203	Enameling
		50.0204	Fiber/Textiles/Weaving
		50.0205	Glass
		50.0206	Metal/Jewelry
		50.0299	Crafts, Other
		50.0401	Design, General
		50.0402	Graphic Design
		50.0403	Illustration Design
		50.0404	Industrial Design
		50.0405	Theatre Design
		50.0499	Design, Other
1010	Cinematography	50.0602	Cinematography/Film
1011	Photography	50.0605	Photography
1099	Other, specify	50.0601	Film Arts, General
		50.0603	Film Animation
		50.0604	Holography
		50.0606	Video
		50.0699	Film Arts, Other
		50.0701	Film Arts, General
		50.0702	Art Conservation
		50.0704	Arts Management
		50.0706	Intermedia
		50.0707	Kinetics
		50.0799	Fine Arts, Other
		50.0901	Music, General
		50.0999	Music, Other
		50.9999	Visual and Performing Arts, Other

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HEGIS Taxonomy *Conventional Academic Subdivisions of Knowledge and Training*		New Classification	
1100	Foreign Languages	16.	Foreign Languages
1101	Foreign languages, general (includes concentration on more than one foreign language without major emphasis on one language)	16.0101	Foreign Languages, Multiple Emphasis
1102	French	16.0901	French
1103	German	16.0501	German
1104	Italian	16.0902	Italian
1105	Spanish	16.0905	Spanish
1106	Russian	16.0402	Russian
1107	Chinese	16.0301	Chinese
1108	Japanese	16.0302	Japanese
1109	Latin	16.0903	Latin
1110	Greek, classical	16.0601	Greek (Classical)
1111	Hebrew	16.1102	Hebrew
1112	Arabic	16.1101	Arabic
1113	Indian (Asiatic)	16.0701	Hindi
		16.0702	Sanskrit
		16.0799	Indic Languages, Other
1114	Scandinavian languages	16.0502	Scandinavian Languages
1115	Slavic languages (other than Russian)	16.0403	Slavic Languages (Other than Russian)
1116	African languages (non-Semitic)	16.0201	African (Non-Semitic) Languages
1199	Other, specify	16.0302	Japanese
		16.0303	Korean
		16.0399	Asiatic Languages, Other
		16.0401	Baltic Languages
		16.0503	Yiddish
		16.0599	Germanic Languages, Other
		16.0602	Greek (Modern)
		16.0801	Iranian Languages
		16.0904	Portuguese
		16.0999	Italic Languages, Other
		16.1001	Native American Languages
		16.1199	Semitic Languages, Other
		16.9999	Foreign Languages, Other
1200	Health Professions	18.	Health Sciences
1201	Health professions, general	18.9999	Health Sciences, Other
1202	Hospital and health care administration	18.0701	Health Care Administration
1203	Nursing (baccalaureate and higher programs)	18.1101	Nursing, General
		18.1102	Anesthetist
		18.1103	Maternal/Child Health
		18.1104	Medical Surgical
		18.1105	Nursing Administration
		18.1106	Psychiatric/Mental Health
		18.1107	Public Health
		18.1199	Nursing, Other
1204	Dentistry, D.D.S. or D.M.D. degree	18.0401	Dentistry, General
1205	Dental specialities (work beyond first-professional degree, D.D.S. or D.M.D.)	18.0402	Dental Public Health
		18.0403	Endodontics
		18.0404	Oral/Maxial Facial Surgery
		18.0405	Oral Pathology
		18.0406	Orthodontics

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HEGIS Taxonomy *Conventional Academic Subdivisions of Knowledge and Training*		New Classification	
1205	Dental specialities (work beyond first-professional degree, D.D.S. or D.M.D) (Continued)	18.0407	Pedodontics
		18.0408	Periodontics
		18.0409	Prosthodontics
		18.0499	Dentistry, Other
1206	Medicine, M.D. degree	18.1001	Medicine, General
1207	Medical specialties (work beyond first-professional degree, M.D.)	18.1002	Allerigies and Endomology
		18.1003	Anesthesiology
		18.1004	Colon and Rectal Surgery
		18.1005	Dermatology
		18.1006	Emergency Medicine
		18.1007	Family Practice
		18.1008	Geriatrics
		18.1009	Immunology
		18.1010	Internal Medicine
		18.1011	Neurological Surgery
		18.1012	Nuclear Medicine
		18.1013	Obstetrics and Gynecology
		18.1014	Ophthalmology
		18.1015	Orthodontic Surgery
		18.1016	Orthopedic
		18.1017	Otorhinolaryngology/Otolaryngology
		18.1018	Pathology
		18.1019	Pediatrics
		18.1020	Physical Medicine and Rehabilitation
		18.1021	Plastic Surgery
		18.1022	Preventive Medicine
		18.1023	Psychiatry
		18.1024	Neurology
		18.1025	Radiology
		18.1026	Surgery
		18.1027	Thoracic Surgery
		18.1028	Urology
		18.1099	Medicine, Other
1208	Occupational therapy	17.0807	Occupational Therapy
1209	Optometry	18.1201	Optometry
1210	Osteopathic medicine, D.O. degree	18.1301	Osteopathic Medicine
1211	Pharmacy	18.1401	Pharmacy
1212	Physical therapy	17.0813	Physical Therapy
1213	Dental hygiene (baccalaureate and higher programs)	17.0102	Dental Hygiene
1214	Public Health	18.2201	Public Health Laboratory Science
1215	Medical record librarianship	18.0703	Medical Records Administration
1216	Podiatry (Pod.D. or D.P.) or podiatric medicine (D.P.M.)	18.1501	Podiatry
1217	Biomedical communication	17.0504	Medical Illustrating
1218	Veterinary medicine (D.V.M. degree)	18.2401	Veterinary Medicine
1219	Veterinary medicine specialties (work beyond first-professional degree, D.V.M.)		
1220	Speech pathology and audiology	18.0103	Speech Pathology/Audiology
1221	Chiropractic	18.0301	Chiropractic
1222	Clinical social work (medical and psychiatric and specialized rehabilitation services)	44.0702	Medical Social Work
1223	Medical laboratory technologies (baccalaureate and higher programs)	18.0901	Medical Laboratory
1224	Dental technologies (baccalaureate and higher programs)	17.0103	Dental Laboratory Technology

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HEGIS Taxonomy *Conventional Academic Subdivisions of Knowledge and Training*		New Classification	
1225	Radiologic technologies (baccalaureate and higher programs)	17.0207	Medical Radiation Dosimetry
		17.0208	Nuclear Medical Technology
		17.0209	Radiograph Medical Technology
1299	Other, specify	18.0101	Audiology
		18.0102	Speech Pathology
		18.0199	Audiology and Speech Pathology, Other
		18.0201	Clinical Anatomy
		18.0202	Clinical Biochemistry
		18.0203	Clinical Microbiology
		18.0204	Clinical Pathology
		18.0205	Physiology
		18.0299	Basic Clinical Health Sciences, Other
		18.0501	Emergency/Disaster Science
		18.0601	Epidemiology
		18.0702	Health Care Planning
		18.0799	Health Sciences Administration, Other
		18.0801	Hematology
		18.1601	Population and Family Planning
		18.1701	Pre-Dentistry
		18.1801	Pre-Medicine
		18.1901	Pre-Pharmacy
		18.2001	Pre-Veterinary
		18.2101	Prosectorial Science
		18.2301	Toxicology (Clinical)
		18.9999	Health Sciences, Other
1300	Home Economics	19.	Home Economics
1301	Home economics, general	19.0101	Home Economics, General
1302	Home decoration and home equipment	19.0601	Human Environment and Housing, General
1303	Clothing and textiles	19.0901	Textiles and Clothing, General
		19.0902	Fashion Design
		19.0903	Textiles and Clothing, Retail
		19.0904	Textile Science
		19.0999	Textiles and Clothing, Other
1304	Consumer economics and home management	19.0401	Family/Consumer Resource Management, General
1305	Family relations and child development	19.0701	Individual and Family Development, General
1306	Foods and nutrition (include dietetics)	19.0501	Food Sciences and Human Nutrition, General
1307	Institutional management and cafeteria management	20.0601	Institutional, Home Management, and Supporting Programs, General
1399	Other, specify	19.0201	Business Home Economics
		19.0301	Family and Community Services, General
		19.0302	Nonformal Education (Extension, Adult/Extended)
		19.0303	Family Services
		19.0399	Family and Community Services, Other
		19.0402	Consumer Science
		19.0403	Family Economics
		19.0499	Family/Consumer Resource Management, Other
		19.0502	Food/Food Sciences
		19.0503	Dietietics/Human Nutritional Services
		19.0504	Human Nutrition
		19.0599	Food Sciences and Human Nutrition, Other

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HEGIS Taxonomy *Conventional Academic Subdivisions of Knowledge and Training*		New Classification	
1399	Other, specify (Continued)	19.0602	Household Equipment
		19.0603	Housing
		19.0699	Human Environment and Housing, Other
		19.0702	Adult Development
		19.0703	Family Counseling
		19.0704	Family Relations
		19.0705	Geriatric Services
		19.0799	Individual and Family Development, Other
		19.0801	International/Comparative Home Economics
		19.9999	Home Economics, Other
1400	Law	22.	Law
1401	Law, General	22.0101	Law
1499	Other, specify	22.0102	Pre-Law
		22.0103	Legal Assisting
		22.0199	Law, Other
1500	Letters	23.	Letters
		38.	Philosophy and Religion
1501	English, general	23.0101	English, General
1502	Literature, English	23.0801	Literature, English
1503	Comparative literature	23.0301	Comparative Literature
1504	Classics	23.0201	Classics
1505	Linguistics (include phonetics, semantics, and philology)	23.0601	Linguistics (Includes Phonetics, Semantics, and Philology)
1506	Speech, debate, and forensic science (rhetoric and public address)	23.1001	Speech, Debate, and Forensics
1507	Creative Writing	23.0501	Creative Writing
1508	Teaching of English as a foreign language	13.1401	Teaching English as a Second Language/Foreign Language
1509	Philosophy	38.0101	Philosophy
1510	Religious studies (exclude theological professions)	38.0201	Religion
1599	Other, specify	23.0401	Composition
		23.0701	Literature, American
		23.0901	Rhetoric
		23.1101	Technical and Business Writing
		23.9999	Letters, Other
		38.9999	Philosophy and Religion, Other
1600	Library Science	25.	Library and Archival Sciences
1601	Library science, general	25.0401	Library Science
1699	Other, specify	25.0101	Library and Archival Sciences, General
		25.0201	Archival Science
		25.0301	Library Assisting
		25.0501	Museology
		25.9999	Library and Archival Sciences, Other

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HEGIS Taxonomy *Conventional Academic Subdivisions of Knowledge and Training*		New Classification	
1700	Mathematics	27.	Mathematics
1701	Mathematics, general	27.0101	Mathematics, General
1702	Statistics, mathematical and theoretical	27.0501	Statistics
1703	Applied mathematics	27.0301	Applied Mathematics
1799	Other, specify	27.0201	Actuarial Sciences
		27.0401	Pure Mathematics
		27.9999	Mathematics, Other
1800	Military Sciences	28.	Military Sciences
1801	Military science (Army)	28.0301	Military Science (Army)
1802	Naval science (Navy, Marines)	28.0401	Naval Science (Navy, Marines)
1803	Aerospace science (Air Force)	28.0101	Aerospace Science (Air Force)
1899	Other, specify	28.0201	Coast Guard Science
		28.9999	Military Sciences, Other
1900	Physical Sciences	40.	Physical Sciences
1901	Physical sciences, general	40.0101	Physical Sciences, General
1902	Physics, general (exclude biophysics)	40.0801	Physics, General
1903	Molecular physics	40.0802	Atomic/Molecular Physics
1904	Nuclear physics	40.0806	Nuclear Physics
1905	Chemistry, general (exclude biochemistry)	40.0501	Chemistry, General
1906	Inorganic chemistry	40.0503	Inorganic Chemistry
1907	Organic chemistry	40.0504	Organic Chemistry
1908	Physical chemistry	40.0506	Physical Chemistry
1909	Analytical chemistry	40.0502	Analytical Chemistry
1910	Pharmaceutical chemistry	40.0505	Pharmaceutical Chemistry
1911	Astronomy	40.0201	Astronomy
1912	Astrophysics	40.0301	Astrophysics
1913	Atmospheric sciences and meteorology	40.0401	Atmospheric Sciences and Meteorology
1914	Geology	40.0601	Geology
1915	Geochemistry	40.0602	Geochemistry
1916	Geophysics and seismology	40.0603	Geophysics and Seismology
1917	Earth sciences, general	40.0703	Earth Science
1918	Paleontology	40.0604	Paleontology
1919	Oceanography	40.0702	Oceanography
1920	Metallurgy	40.0701	Metallurgy
1999	Other, specify	40.0599	Chemistry, Other
		40.0699	Geological Sciences, Other
		40.0803	Electron Physics
		40.0804	Elementary Particle Physics
		40.0805	Fluids and Plasmas
		40.0807	Optics
		40.0808	Solid State Physics
		40.0899	Physics, Other
		40.0901	Planetary Science
		40.9999	Physical Sciences, Other

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2000	Psychology	42.	Psychology
2001	Psychology, general	42.0101	Psychology, General
2002	Experimental psychology (animal and human)	42.0801	Experimental Psychology
2003	Clinical psychology	42.0201	Clinical Psychology
2004	Psychology for counseling	42.0601	Counseling Psychology
2005	Social psychology	42.1601	Social Psychology
2006	Psychometrics	42.1301	Psychometrics
2007	Statistics in psychology	42.1501	Quantitative Psychology
2008	Industrial psychology	42.0901	Industrial and Organizational Psychology
2009	Developmental psychology	42.0701	Developmental Psychology
2010	Physiological psychology	42.1101	Physiological Psychology
2099	Other, specify	42.9999	Psychology, Other
		42.0301	Cognitive Psychology
		42.0401	Community Psychology
		42.0501	Comparative Psychology
		42.1001	Personality Psychology
		42.1201	Psycholinguistics
		42.1401	Psychopharmacology
2100	Public Affairs and Services	43.	Protective Services
		44.	Public Affairs
2101	Community services, general	44.0201	Community Services
2102	Public administration	44.0401	Public Administration
2103	Parts and recreation management	31.0301	Parks and Recreation Management
2104	Social work and helping services (other than clinical social work)	44.0701	Social Work, General
		44.0702	Medical Social Work
		44.0799	Social Work, Other
2105	Law enforcement and corrections (baccalaureate and higher programs)	43.0101	Correctional Administration
		43.0102	Corrections
		43.0103	Criminal Justice Administration
		43.0104	Criminal Justice Studies
		43.0106	Forensic Studies
		43.0107	Law Enforcement
		43.0108	Law Enforcement Administration
		43.0199	Criminal Justice, Other
2106	International public service (other than diplomatic service)	44.0301	International Public Service
2199	Other, specify	43.0202	Fire Protection Administration
		43.0299	Fire Protection, Other
		43.9999	Protective Services, Other
		44.0101	Public Affairs, General
		44.0501	Public Policy Studies
		44.0601	Public Sanitation
		44.0602	Public Transportation
		44.0603	Public Utilities
		44.0699	Public Works, Other
		44.9999	Public Affairs, Other

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HEGIS Taxonomy *Conventional Academic Subdivisions of Knowledge and Training*		New Classification	
2200	Social Sciences	45.	Social Sciences
2201	Social sciences, general	45.1010	Social Sciences, General
2202	Anthropology	45.0201	Anthropology
2203	Archaeology	45.0301	Archeology
2204	Economics	45.0601	Economics
2205	History	45.0801	History
2206	Geography	45.0701	Geography
2207	Political science and government	45.1001	Political Science and Government
2208	Sociology	45.1101	Sociology
2209	Criminology	45.0401	Criminology
2210	International relations	45.0901	International Relations
2211	Afro-American (black culture) studies	05.0201	Afro-American (Black) Studies
2212	American Indican cultural studies	05.0202	American Indian Studies
2213	Mexican-American cultural studies	05.0203	Hispanic-American Studies
2214	Urban studies	45.1201	Urban Studies
2215	Demography	45.0501	Demography
2299	Other, specify	45.9999	Social Sciences, Other
2300	Theology	39.	Theology
2301	Theological professions, general	39.0601	Theological Studies
2302	Religious music	39.0501	Religious Music
2303	Biblical languages	39.0101	Biblical Languages
2304	Religious education	39.0401	Religious Education
2399	Other, specify	39.0201	Bible Studies
		39.0301	Missionary Studies
		39.9999	Theology, Other
4900	Interdisciplinary Studies	30.	Multi/Interdisciplinary Studies
4901	General liberal arts and sciences	24.0101	Liberal/General Studies
4902	Biological and physical sciences	30.0101	Biological and Physical Sciences
4903	Humanities and social sciences	30.0401	Humanities and Social Sciences
4904	Engineering and other disciplines	30.0301	Engineering and Other Disciplines
4999	Other, specify	24.0199	Liberal/General Studies, Other
		30.0201	Clinical Pastoral Care
		30.0501	Peace Studies
		30.0601	Systems Science
		30.0701	Women's Studies
		30.9999	Multi/Interdisciplinary Studies, Other

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HEGIS Taxonomy *Technological and Occupational Curriculums Leading To Associate Degrees and Other Awards Below the Baccalaureate*		New Classification	
5000	Business and Commerce Technologies	07.	Business and Office
5001	Business and commerce technologies, general	07.9999	Business and Office, Other
5002	Accounting technologies	07.01	Accounting, Bookkeeping, and Related Programs
5003	Banking and finance technologies	07.02	Banking and Related Financial Programs
5004	Marketing, distribution, purchasing, business, and industrial management technologies	08.	Marketing and Distribution
5005	Secretarial technologies (include office machines training)	07.06	Secretarial and Related Programs
		07.07	Typing, General Office, and Related Programs
5006	Personal service technologies (stewardess, cosmetologist, etc.)	12.04	Personal Services
		49.0106	Flight Attendants
5007	Photography technologies	10.0103	Photographic Technology
		48.0204	Commercial Photography
5008	Communications and broadcasting technologies (radio/television, newspapers)	10.	Communication Technologies
5009	Printing and lithography technologies	48.0206	Lithography, Photography, and Platemaking
		48.0208	Printing Press Operations
5010	Hotel and restaurant management technologies	08.09	Hospitality and Recreation Marketing
5011	Transportation and public utility technologies	08.11	Transportation and Travel Marketing
		44.06	Public Works
5012	Applied arts, graphic arts, and fine arts technologies (include advertising design)	50.0801	Graphic Arts Technology
		50.9999	Visual and Performing Arts, Other
5099	Other, specify	07.9999	Business and Office, Other
5100	Data Processing Technologies	07.03	Business Data Processing and Related Programs
5101	Data processing technologies, general	07.0399	Business Data Processing and Related Programs, Other
5102	Keypunch operator and other input preparation technologies	07.0303	Business Data Entry Equipment Operation
5103	Computer programmer technologies	07.0305	Business Data Programming
5104	Computer operator and peripheral equipment operation technologies	07.0302	Business Computer and Console Operation
		07.0304	Business Data Peripheral Equipment Operation
5105	Data processing equipment maintenance technologies	47.0102	Business Machine Repair
		47.0104	Computer Electronics
5199	Other, specify	07.0399	Business Data Processing and Related Programs, Other
		47.0199	Electrical and Electronics Equipment Repair, Other
		07.0306	Business Systems Analysis
5200	Health Services and Paramedical Technologies	17.	Allied Health
5201	Health services assistant technologies, general	17.9999	Allied Health, Other
5202	Dental assistant technologies	17.0101	Dental Assisting
5203	Dental hygiene technologies	17.0102	Dental Hygiene
5204	Dental laboratory technologies	17.0103	Dental Laboratory Technology
5205	Medical or biological laboratory assistant technologies	17.0309	Medical Laboratory Technology
		17.0399	Medical Laboratory Technologies, Other
5206	Animal laboratory assistant technologies	17.0512	Veterinarian Assisting
5207	Radiologic technologies (X-ray, etc.)	17.0209	Radiograph Medical Technology
5208	Nursing, R.N. (less than 4-year program)	18.1101	Nursing, General

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HEGIS Taxonomy *Technological and Occupational Curriculums Leading To Associate Degrees and Other Awards Below the Baccalaureate*		New Classification	
5209	Nursing, practical (L.P.N. or L.V.N. less than 4-year program)	17.0605	Practical Nursing
5210	Occupational therapy technologies	17.0808	Occupational Therapy Assisting
		17.0809	Occupational Therapy Aide
5211	Surgical technologies	17.0211	Surgical Technology
5212	Optical technologies (include ocular care, opthalmic, optometric technologies)	17.07	Ophthalmic Services
5213	Medical record technologies	17.0506	Medical Records Technology
5214	Medical assistant and medical office assistant technologies	17.0503	Medical Assisting
5215	Inhalation therapy technologies	17.0210	Respiratory Therapy Technology
5216	Psychiatric technologies (include mental health aide programs)	17.04	Mental Health/Human Services
5217	Electro diagnostic technologies (include E.K.G., E.E.G., etc.)	17.0203	Electrocardiograph Technology
		17.0204	Electroencephalograph Technology
5218	Institutional management technologies (rest homes, etc.)	17.9999	Allied Health, Other
5219	Physical therapy technologies	17.0814	Physical Therapy Aide
		17.0815	Physical Therapy Assisting
5299	Other, specify	17.9999	Allied Health, Other
5300	Mechanical and Engineering Technologies	15.	Engineering and Engineering-Related Technologies
5301	Mechanical and engineering technologies, general	15.9999	Engineering and Engineering-Related Technologies, Other
5302	Aeronautical and aviation technologies	15.0801	Aeronautical Technology
5303	Engineering graphics (tool and machine drafting and design)	48.0105	Mechanical Drafting
5304	Architectural drafting technologies	48.0102	Architectural Drafting
5305	Chemical technologies (include plastics)	15.0601	Chemical Manufacturing Technology
		41.0301	Chemical Technology
5306	Automotive technologies	15.0803	Automotive Technology
5307	Diesel technologies	47.0605	Diesel Engine Mechanics
5308	Welding technologies	48.0508	Welding, Brazing, and Soldering
5309	Civil technologies (surveying, photogrammetry, etc.)	15.0201	Civil Technology
		15.0203	Surveying and Mapping Technology
5310	Electronics and machine technologies (television, appliance, office machine repair, etc.)	15.03	Electrical and Electronic Technologies
		47.01	Electrical and Electronics Equipment Repair
5311	Electromechanical technologies	15.0403	Electromechanical Technology
5312	Industrial technologies	15.0603	Industrial Technology
5313	Textile technologies	15.0609	Textile Technology
5314	Instrumentation technologies	15.0404	Instrumentation Technology
5315	Mechanical technologies	15.0805	Mechanical Design Technology
5316	Nuclear technologies	41.02	Nuclear Technologies
		47.0503	Industrial Nuclear Energy
5317	Construction and building technologies (carpentry, electrical work, plumbing, sheet metal, air conditioning, heating, etc.)	46.	Construction Trades
		47.	Mechanics and Repairers
		48.	Precision Production
5399	Other, specify	15.9999	Engineering and Engineering-Related Technologies, Other

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HEGIS Taxonomy *Technological and Occupational Curriculums Leading To Associate Degrees and Other Awards Below the Baccalaureate*		New Classification	
5400	Natural Science Technologies	41.	Science Technologies
5401	Natural science technologies, general	41.9999	Science Technologies, Other
5402	Agricultural technologies (include horticulture)	01.9999	Agribusiness and Agricultural Production, Other
		15.0802	Agricultural Equipment Technology
5403	Forestry and wildlife technologies (include fisheries)	03.0301	Fishing and Fisheries, General
		03.0401	Forestry Production and Processing, General
		03.0404	Forest Products Processing Technology
		03.0601	Wildlife Management
5404	Food services technologies	20.0499	Food Production, Management, and Services, Other
5405	Home economics technologies	20.9999	Vocational Home Economics, Other
5406	Marine and oceanographic technologies	15.0605	Marine Products Technology
		41.0102	Oceanographic (Biological) Technology
		41.0305	Oceanographic (Physical) Technology
5407	Laboratory technologies, general	41.9999	Science Technologies, Other
5408	Sanitation and public health inspection technologies (environmental health technologies)	15.0599	Environmental Control Technologies, Other
5499	Other, specify	41.9999	Science Technologies, Other
5500	Public Service Related Technologies	43.	Protective Services
		44.	Public Affairs
5501	Public service technologies, general	43.9999	Protective Services, Other
5502	Bible study or religion-related occupations	39.9999	Theology, Other
5503	Education technologies (teach aide and 2-year teacher training programs)	10.0101	Educational Media Technology
		20.0205	Teacher Aide
5504	Library assistant technologies	25.0301	Library Assisting
5505	Police, law enforcement, corrections technologies	43.0102	Corrections
		43.0105	Criminal Justice Technology
		43.0107	Law Enforcement
5506	Recreation and social work related technologies	31.0201	Outdoor Recreation
		44.0201	Community Services
5507	Fire control technology	43.0201	Fire Control and Safety Technology
		43.0203	Firefighting
5508	Public administration and management technologies	44.9999	Public Affairs, Other
5599	Other, specify	43.9999	Protective Services, Other
		44.9999	Public Affairs, Other

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Crosswalk Between The Handbook VI Vocational Program Listing and The New Classification

This appendix is designed to enable users to locate programs by crosswalking from previously used Handbook VI code listings into the new classification code listings. This appendix will be most helpful to those who are required to supply data for various data collections activities.

Vocational Programs

Handbook VI Vocational Programs		New Classification	
01.0000	Agriculture	01.	Agribusiness and Agricultural Production
		03.	Renewable Natural Resources
01.0100	Agricultural Production	01.0301	Agricultural Production, General
01.0101	Animal Science	01.0302	Animal Production
01.0102	Plant Science	01.0304	Crop Production
01.0103	Farm Mechanics	01.0201	Agricultural Mechanics, General
01.0104	Farm Business Management	01.0104	Farm and Ranch Management
01.0199	Other Agricultural Production	01.0303	Aquaculture
		01.0399	Agricultural Production, Other
01.0200	Agricultural Supplies/Services	01.0501	Agricultural Services and Supplies, General
		01.0502	Agricultural Services
		01.0503	Agricultural Supplies Marketing
		01.0504	Animal Grooming
		01.0505	Animal Training
		01.0506	Horseshoeing
		01.0599	Agricultural Services and Supplies, Other
01.0300	Agricultural Mechanics	01.0201	Agricultural Mechanics, General
01.0301	Agricultural Power and Machinery	01.0204	Agricultural Power Machinery
01.0302	Agricultural Structures and Conveniences	01.0205	Agricultural Structures, Equipment, and Facilities
01.0303	Soil Management	01.0206	Soil and Water Mechanical Practices
01.0304	Water Management	01.0206	Soil and Water Mechanical Practices
01.0305	Agricultural Mechanics Skills	01.0203	Agricultural Mechanics, Construction, and Maintenance Skills
01.0306	Agricultural Construction and Maintenance	01.0203	Agricultural Mechanics, Construction, and Maintenance Skills
01.0307	Agricultural Electrification	01.0202	Agricultural Electrification, Power, and Controls
01.0399	Other Agricultural Mechanics	01.0299	Agricultural Mechanics, Other
01.0400	Agricultural Products	01.0401	Agricultural Products and Processing, General
01.0401	Food Products	01.0402	Food Products
01.0402	Nonfood Products	01.0403	Nonfood Products
01.0499	Other Agricultural Products	01.0499	Agricultural Products and Processing, Other
01.0500	Ornamental Horticulture (Production, Processing, Marketing, and Services)	01.0601	Horticulture, General
01.0501	Arboriculture	01.0602	Arboriculture
01.0502	Floriculture	01.0603	Floriculture
01.0503	Greenhouse Operation and Management	01.0604	Greenhouse Operation and Management
01.0504	Landscaping	01.0605	Landscaping
01.0505	Nursery Operation and Management	01.0606	Nursery Operation and Management
01.0506	Turf Management	01.0607	Turf Management
01.0599	Other Ornamental Horticulture	01.0699	Horticulture, Other

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Handbook VI Vocational Programs		New Classification	
01.0600	Agricultural Resources (Conservation, Utilization, and Services)	03.0101	Renewable Natural Resources, General
01.0601	Forests	03.9999	Renewable Natural Resources, Other
01.0602	Recreation	31.0201	Outdoor Recreation
01.0603	Soil	03.9999	Renewable Natural Resources, Other
01.0604	Wildlife — including game farms and hunting areas	01.0305	Game Farm Management
		03.0601	Wildlife Management
01.0605	Water	03.9999	Renewable Natural Resources, Other
01.0606	Air	03.9999	Renewable Natural Resources, Other
01.0607	Fish — including farms and hatcheries	03.0301	Fishing and Fisheries, General
		03.0302	Fisheries
		03.0399	Fishing and Fisheries, Other
01.0608	Range	03.9999	Renewable Natural Resources, Other
01.0699	Other Agricultural Resources	03.9999	Renewable Natural Resources, Other
01.0700	Forestry (Production, Processing, Management, Marketing, and Services)	03.0401	Forestry Production and Processing, General
01.0701	Forests	03.0402	Forest Production
01.0702	Forest Protection	03.0201	Conservation and Regulation, General
		03.0202	Conservation
		03.0203	Resources Protection and Regulation
		03.0299	Conservation and Regulation, Other
01.0703	Logging (harvesting and transporting)	03.0405	Logging
01.0704	Wood Utilization	03.0403	Forest Products Utilization
01.0705	Recreation	31.0201	Outdoor Recreation
01.0706	Special Products	03.0406	Pulp and Paper Production
		03.0499	Forestry Production and Processing, Other
01.0799	Other Forestry	03.0499	Forestry Production and Processing, Other
01.9900	Other Agriculture	01.0101	Agricultural Business and Management, General
		01.0199	Agricultural Business and Management, Other
		01.9999	Agribusiness and Agricultural Production, Other
		03.9999	Renewable Natural Resources, Other
04.0000	Distributive Education	08.	Marketing and Distribution
04.0100	Advertising Services	09.0201	Advertising
04.0200	Apparel and Accessories	08.0101	Apparel and Accessories Marketing, General
		08.0102	Fashion Merchandising
		08.0104	Footwear Marketing
		08.0105	Jewelry Marketing
		08.0199	Apparel and Accessories Marketing, Other
04.0300	Automotive	08.1203	Automotive Vehicles and Accessories Marketing
04.0400	Finance and Credit	08.0401	Financial Services Marketing, General
		08.0402	Banking Marketing
		08.0403	Credit Marketing
		08.0404	Credit Union Marketing
		08.0405	Savings and Loan Marketing
		08.0406	Securities and Commodities Marketing
		08.0499	Financial Services Marketing, Other
04.0500	Floristry	08.0503	Floristry
04.0600	Food Distribution	08.0601	Food Marketing, General
		08.0602	Convenience Store Marketing
		08.0603	Specialty Foods Marketing
		08.0604	Supermarket Marketing
		08.0605	Wholesale Food Marketing
		08.0699	Food Marketing, Other
04.0700	Food Services	08.0905	Waiter/Waitress and Related Services

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Handbook VI Vocational Programs		New Classification	
04.0800	General Merchandise	08.0701	Auctioneering
		08.0704	Purchasing
		08.0705	Retailing
		08.0706	Sales
		08.0707	Wholesaling
		08.0799	General Marketing, Other
04.0900	Hardware, Building Materials, Farm and Garden Supplies and Equipment	08.0502	Farm and Garden Supplies Marketing
		08.0803	Building Materials Marketing
		08.0806	Hardware Marketing
04.1000	Home Furnishings	08.0801	Home and Office Products Marketing, General
		08.0802	Appliance Marketing
		08.0804	Floor Coverings, Draperies, and Upholstery Marketing
		08.0805	Furniture Marketing
		08.0807	Office Products and Equipment Marketing
		08.0808	Specialty Home Furnishings Marketing
		08.0899	Home and Office Products Marketing, Other
04.1100	Hotel and Lodging	06.0701	Hotel/Motel Management
		08.0901	Hospitality and Recreation Marketing, General
		08.0902	Marketing of Hotel/Motel Services
04.1200	Industrial Marketing	08.0702	Industrial Sales
04.1300	Insurance	08.1001	Insurance Marketing, General
		08.1002	Accident and Health Insurance Marketing
		08.1003	Life Insurance Marketing
		08.1004	Property and Casualty Insurance Marketing
		08.1099	Insurance Marketing, Other
04.1400	International Trade	08.0703	International Marketing
04.1500	Personal Services	08.0201	Business and Personal Services Marketing, General
		08.0202	Display
		08.0203	Marketing of Business or Personal Services
		08.0299	Business and Personal Services Marketing, Other
04.1600	Petroleum	08.1204	Petroleum Wholesaling
04.1700	Real Estate	06.1701	Real Estate, General
		06.1702	Commercial Property
		06.1703	Property Management
		06.1707	Residential Property
		06.1799	Real Estate, Other
04.1800	Recreation and Tourism	06.0702	Recreational Enterprises Management
		06.0703	Resort Management
		06.0704	Restaurant Management
		08.0901	Hospitality and Recreation Marketing, General
		08.0903	Marketing of Recreational Services
		08.0904	Recreational Products Marketing
		08.0999	Hospitality and Recreation Marketing, Other
		08.1104	Tourism
04.1900	Transportation	06.0705	Transportation Management
		08.1101	Transportation and Travel Marketing, General
		08.1102	Freight Transportation Marketing
		08.1103	Passenger Transportation Marketing
		08.1105	Travel Services Marketing
		08.1106	Warehouse Services Marketing
		08.1199	Transportation and Travel Marketing, Other
04.2000	Other Retail Trade	06.1801	Small Business Management
		06.1802	Small Business Ownership
		06.1899	Small Business Management and Ownership, Other
		08.0301	Entrepreneurship, General
04.3100	Other Wholesale Trade	08.9999	Marketing and Distribution, Other
04.9900	Other Instructional Programs	06.0799	Institutional Management, Other
		06.1401	Marketing Management

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Handbook VI Vocational Programs		New Classification	
04.9900	Other Instructional Programs (Continued)	06.1402	Marketing Research
		06.1499	Marketing Management and Research, Other
		08.0501	Floristry, Farm and Garden Supplies Marketing, General
		08.0599	Floristry, Farm and Garden Supplies Marketing, Other
		08.1201	Vehicles and Petroleum Marketing, General
		08.1202	Agricultural Implements and Machinery Marketing
		08.1205	Recreational Vehicles and Accessories Marketing
		08.1206	Service Station Retailing
		08.1207	Vehicle Rental and Leasing
		08.1299	Vehicles and Petroleum Marketing, Other
		08.9999	Marketing and Distribution, Other
07.0000	Health Occupations Education	17.	Allied Health
07.0101	Dental Assisting	17.0101	Dental Assisting
07.0102	Dental Hygiene (Associate Degree)	17.0102	Dental Hygiene
07.0103	Dental Laboratory Technology	17.0103	Dental Laboratory Technology
07.0199	Other Dental	17.0199	Dental Services, Other
07.0200	Medical Laboratory Technology	17.0309	Medical Laboratory Technology
07.0201	Cytology (Cytotechnology)	17.0306	Cytotechnology
07.0202	Histology	17.0308	Histologic Technology
07.0203	Medical Laboratory Assisting	17.0305	Clinical Laboratory Assisting
07.0204	Hematology	17.0307	Hematology Technology
07.0299	Other Medical Laboratory Technology	17.0301	Blood Bank Technology
		17.0302	Chemistry Technology
		17.0303	Clinical Animal Technology
		17.0304	Clinical Laboratory Aide
		17.0310	Medical Technology
		17.0311	Microbiology Technology
		17.0399	Medical Laboratory Technologies, Other
07.0301	Nursing (Associate Degree)	18.1101	Nursing, General
07.0302	Practical (Vocational) Nursing	17.0605	Practical Nursing
07.0303	Nursing Assistance (Aide)	17.0602	Nursing Assisting
07.0304	Psychiatric Aide	17.0405	Mental Health/Human Services Assisting
07.0305	Surgical Technician (Operating Room Technician)	17.0211	Surgical Technology
07.0306	Obstetrical Technician	17.0603	Obstetrical Technology
07.0307	Home Health Aide	17.0404	Home Health Aide
07.0308	School Health Aide	17.9999	Allied Health, Other
07.0399	Other Nursing	17.0601	Geriatric Aide
		17.0604	Pediatric Aide
		17.0606	Ward Service Management
		17.0699	Nursing-Related Services, Other
07.0400	Rehabilitation	17.0899	Rehabilitation Services, Other
07.0401	Occupational Therapy	17.0807	Occupational Therapy
		17.0808	Occupational Therapy Assisting
		17.0809	Occupational Therapy Aide
07.0402	Physical Therapy	17.0813	Physical Therapy
		17.0814	Physical Therapy Aide
		17.0815	Physical Therapy Assisting
07.0403	Prosthetics	17.0810	Orthotic/Prosthetic Assisting
		17.0811	Orthotics/Prosthetics
07.0404	Orthotics	17.0810	Orthotic/Prosthetic Assisting
		17.0811	Orthotics/Prosthetics
07.0499	Other Rehabilitation	17.0801	Art Therapy
		17.0802	Corrective Therapy
		17.0803	Dance Therapy

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Handbook VI Vocational Programs		New Classification	
07.0499	Other Rehabilitation (Continued)	17.0804	Exercise Physiology
		17.0805	Manual Arts Therapy
		17.0806	Music Therapy
		17.0816	Recreational Therapy
		17.0817	Recreational Therapy Technology
		17.0820	Speech/Hearing Therapy Aide
		17.0821	Speech-Language Pathology/Audiology
		17.0899	Rehabilitation Services, Other
07.0500	Radiologic	17.0208	Nuclear Medical Technology
		17.0209	Radiograph Medical Technology
07.0600	Opthalmic	17.0799	Ophthalmic Services, Other
07.0601	Opthalmic Dispensing	17.0701	Opthalmic Dispensing
07.0602	Orthoptics	17.0706	Orthoptics
07.0603	Optometrist Assistant	17.0704	Optometric Assisting
07.0699	Other Opthalmic	17.0702	Ophthalmic Laboratory Technology
		17.0703	Ophthalmic Medical Assisting
		17.0705	Optometric Technology
		17.0799	Ophthalmic Services, Other
07.0700	Environmental Health	17.9999	Allied Health, Other
07.0800	Mental Health Technology	17.0406	Mental Health/Human Services Technology
07.0801	Mental Health Technician	17.0406	Mental Health/Human Services Technology
07.0802	Mental Retardation Aide	17.0499	Mental Health/Human Services, Other
07.0899	Other Mental Health Technology	17.0401	Alcohol/Drug Abuse Specialty
		17.0403	Genetic Counseling
		17.0407	Rehabilitation Counseling
		17.0408	Therapeutic Child Care Work
		17.0499	Mental Health/Human Services, Other
07.0900	Miscellaneous Health Occupations Education	17.0501	Animal Technology
		17.0503	Medical Assisting
		17.0504	Medical Illustrating
		17.0505	Medical Office Management
		17.0506	Medical Records Technology
		17.0507	Pharmacy Assisting
		17.0510	Podiatric Assisting
		17.0511	Veterinarian Aide
		17.0512	Veterinarian Assisting
		17.0513	Ward Clerk
		17.0599	Miscellaneous Allied Health Services, Other
07.0901	Electroencephalograph Technician	17.0204	Electroencephalograph Technology
07.0902	Electrocardiograph Technician	17.0203	Electrocardiograph Technology
07.0903	Inhalation Therapy	17.0210	Respiratory Therapy Technology
		17.0818	Respiratory Therapy
		17.0819	Respiratory Therapy Assisting
07.0904	Medical Assistant (Assistant in physician's office)	17.0508	Physician Assisting-Primary Care
		17.0509	Physician Assisting-Specialty
07.0905	Central Supply Technician	17.0502	Central Supply Technology
07.0906	Community Health Aide	17.0402	Community Health Work
07.0907	Medical Emergency Technician	17.0205	Emergency Medical Technology-Ambulance
		17.0206	Emergency Medical Technology-Paramedic
07.0908	Food Service Supervisor	17.9999	Allied Health, Other
07.0909	Mortuary Science	12.0301	Funeral Services
07.0910	Orthopedic Assisting	17.0812	Orthopedic Assisting
07.9900	Other Health Occupations Education	17.0201	Cardiopulmonary Technology
		17.0202	Dialysis Technology

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Handbrook VI Vocational Programs		New Classification	
07.9900	Other Health Occupations Education (Continued)	17.0207	Medical Radiation Dosimetry
		17.0212	Ultrasound Technology
		17.0299	Diagnostic and Treatment Services, Other
		17.9999	Allied Health, Other
09.0000	Home Economics	20.	Vocational Home Economics
09.0101	Comprehensive Homemaking or Home Economics	20.0101	Comprehensive Consumer and Homemaking Home Economics
09.0102	Child Development	20.0102	Child Development, Care, and Guidance
09.0103	Clothing and Textiles	20.0103	Clothing and Textiles
09.0104	Consumer Education	20.0104	Consumer Education
09.0105	Family Health	20.0106	Family/Individual Health
09.0106	Family Relations	20.0107	Family Living and Parenthood
09.0107	Foods and Nutrition	20.0108	Food and Nutrition
09.0108	Home Management	20.0109	Home Management
09.0109	Housing and Home Furnishings	20.0110	Housing, Home Furnishing and Equipment
09.0199	Other Homemaking	20.0199	Consumer and Homemaking Home Economics, Other
09.0201	Care and Guidance of Children	20.0201	Child Care and Guidance Management and Services, General
		20.0202	Child Care Aide/Assisting
		20.0203	Child Care Management
		20.0204	Foster Care/Family Care
		20.0205	Teacher Aide
		20.0299	Child Care and Guidance Management and Services, Other
09.0202	Clothing Management, Production, and Services	20.0301	Clothing, Apparel, and Textiles Management, Production, and Services, General
		20.0302	Clothing Maintenance Aide
		20.0303	Commercial Garment and Apparel Construction
		20.0304	Custom Apparel/Garment Seamstress
		20.0305	Custom Tailoring and Alteration
		20.0306	Fashion/Fabric Coordination
		20.0307	Textiles Testing
		20.0308	Wedding/Specialty Consulting
		20.0399	Clothing, Apparel, and Textiles Management, Production, and Services, Other
09.0203	Food Management, Production, and Services	20.0401	Food Production, Management and Services, General
		20.0402	Baking
		20.0403	Chef/Cook
		20.0404	Dietetic Aide/Assisting
		20.0405	Food Catering
		20.0406	Food Service
		20.0407	Food Testing
		20.0408	School Food Service
		20.0499	Food Production, Management and Services, Other
09.0204	Home Furnishings, Equipment, and Services	20.0501	Home Furnishings and Equipment Management, Production, and Services, General
		20.0502	Custom Drapery and Window Treatment Design/Making
		20.0503	Custom Slipcovering and Upholstering
		20.0504	Floral Design
		20.0505	Home Decorating
		20.0506	Home Furnishings Aide
		20.0507	Home-Service Assisting

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Handbook VI Vocational Programs		New Classification	
09.0204	Home Furnishings, Equipment, and Services (Continued)	20.0599	Home Furnishings and Equipment Management, Production, and Services, Other
09.0205	Institutional and Home Management and Supporting Services	20.0601	Institutional, Home Management, and Supporting Services, General
		20.0602	Companion to the Aged
		20.0603	Consumer Aide/Assisting
		20.0604	Custodial Services
		20.0605	Executive Housekeeping
		20.0606	Homemaker's Aide
		20.0607	Therapeutic Recreation Aide
		20.0699	Institutional, Home Management, and Supporting Services, Other
09.0299	Other Occupational Preparation	04.0501	Interior Design
		20.0105	Exploratory Homemaking
		20.9999	Vocational Home Economics, Other
10.0000	Industrial Arts	21.	Industrial Arts
10.0100	Construction	21.0102	Construction
10.0200	Crafts (Industrial)	21.0199	Industrial Arts, Other
10.0300	Drafting	21.0103	Drafting and Design
10.0400	Electricity/Electronics	21.0104	Electricity/Electronics
10.0500	Elementary School Industrial Arts	21.0199	Industrial Arts, Other
10.0600	General Industrial Arts (Formerly General Shop)	21.0101	Industrial Arts, General
10.0700	Graphic Arts	21.0106	Graphic Arts
10.0800	Home Mechanics	21.0199	Industrial Arts, Other
10.0900	Industrial Arts Mathematics	21.0199	Industrial Arts, Other
10.1000	Industrial Arts Science (Applied Chemistry)	21.0199	Industrial Arts, Other
10.1100	Industrial Arts Science (Applied Physics)	21.0199	Industrial Arts, Other
10.1200	Industrial Materials and Processes	21.0107	Manufacturing/Materials Processing
10.1300	Manufacturing	21.0107	Manufacturing/Materials Processing
10.1400	Metals	21.0199	Industrial Arts, Other
10.1500	Plastics	21.0199	Industrial Arts, Other
10.1600	Power/Automotive Mechanics	21.0105	Energy, Power, and Transportation
10.1700	Research and Development	21.0199	Industrial Arts, Other
10.1800	Service Industries	21.0199	Industrial Arts, Other
10.1900	Woods	21.0199	Industrial Arts, Other
10.9900	Other Industrial Arts	21.0199	Industrial Arts, Other
14.0000	Office Occupations	07.	Business and Office
14.0100	Accounting and Computing Occupations	07.0101	Accounting, Bookkeeping, and Related Programs, General
14.0101	Accountants	07.0102	Accounting and Computing
14.0102	Bookkeepers	07.0103	Bookkeeping
14.0103	Cashiers	07.0199	Accounting, Bookkeeping, and Related Programs, Other
14.0104	Machine Operators: Billing, Bookkeeping, and Computing	07.0104	Machine Billing, Bookkeeping, and Computing
14.0105	Tellers	07.0205	Teller
14.0199	Other Accounting and Computing Occupations	07.0199	Accounting, Bookkeeping, and Related Programs, Other
14.0200	Business Data Processing Systems Occupations	07.0301	Business Data Processing and Related Programs, General
14.0201	Computer and Console Operators	07.0302	Business Computer and Console Operation
14.0202	Peripheral Equipment Operators	07.0304	Business Data Peripheral Equipment Operation

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Handbook VI Vocational Programs		New Classification	
14.0203	Programmers	07.0305	Business Data Programming
14.0204	Systems Analysts	07.0306	Business Systems Analysis
14.0299	Other Business Data Processing Systems Occupations	07.0303	Business Data Entry Equipment Operation
		07.0399	Business Data Processing and Related Programs, Other
14.0300	Filing, Office Machines, and General Office Clerical Occupations	07.0701	Typing, General Office, and Related Programs, General
14.0301	Duplicating Machine Operators	07.0704	Duplicating Machine Operation
14.0302	File Clerks	07.0799	Typing, General Office, and Related Programs, Other
14.0303	General Office Clerks	07.0705	General Office Clerk
14.0399	Other Filing, Office Machines, and General Office Clerical Occupations	07.0799	Typing, General Office, and Related Programs, Other
14.0400	Information Communication Occupations	07.0701	Typing, General Office, and Related Programs, General
14.0401	Communication Systems Clerks and Operations	07.0707	Receptionist and Communication Systems Operation
14.0402	Correspondence Clerks	07.0703	Correspondence Clerk
14.0403	Mail and Postal Clerks	07.0706	Mail and Order Clerk
14.0404	Mail-preparing and Mail-handling Machine Operators	07.0799	Typing, General Office, and Related Programs, Other
14.0405	Messengers and Office Boys and Girls	07.0799	Typing, General Office, and Related Programs, Other
14.0406	Receptionists and Information Clerks	07.0707	Receptionist and Communication Systems Operation
14.0499	Other Information Communication Occupations	07.0799	Typing, General Office, and Related Programs, Other
14.0500	Materials Support Occupations: Transporting, Storing, and Recording	07.0799	Typing, General Office, and Related Programs, Other
14.0501	Planning and Production Clerks	07.0799	Typing, General Office, and Related Programs, Other
14.0502	Quality Control Clerks	07.0799	Typing, General Office, and Related Programs, Other
14.0503	Shipping and Receiving Clerks	07.0708	Shipping, Receiving, and Stock Clerk
14.0504	Stock and Inventory Clerks	07.0708	Shipping, Receiving, and Stock Clerk
14.0505	Traffic, Rate, and Transportation Clerks	07.0709	Traffic, Rate, and Transportation Clerk
14.0599	Other Materials Support Occupations: Transporting, Storing, and Recording Occupations	07.0799	Typing, General Office, and Related Programs, Other
14.0600	Personnel, Training, and Related Occupations	07.0501	Personnel and Training Programs, General
14.0601	Educational Assistants and Training Specialists	07.0502	Educational Assisting and Training
14.0602	Interviewers and Tests Technicians	07.0599	Personnel and Training Programs, Other
14.0603	Personnel Assistants	07.0503	Personnel Assisting
14.0699	Other Personnel, Training, and Related Occupations	07.0599	Personnel and Training Programs, Other
14.0700	Stenographic, Secretarial, and Related Occupations	07.0601	Secretarial and Related Programs, General
14.0701	Executive Secretary	07.0603	Executive Secretarial
14.0702	Secretaries	07.0606	Secretarial
14.0703	Stenographers	07.0607	Stenographic
14.0799	Other Stenographic, Secretarial, and Related Occupations	07.0602	Court Reporting
		07.0604	Legal Secretarial
		07.0605	Medical Secretarial
		07.0608	Word Processing
		07.0699	Secretarial and Related Programs, Other
14.0800	Supervisory and Administrative Management Occupations	07.0401	Office Supervision and Management
14.0900	Typing and Related Occupations	07.0701	Typing, General Office, and Related Programs, General
14.0901	Clerk Typists	07.0702	Clerk-Typist
14.0902	Typists	07.0710	Typing
14.0999	Other Typing and Related Occupations	07.0799	Typing, General Office, and Related Programs, Other
14.9900	Other Office Occupations	06.0401	Business Administration and Management, General
		06.0404	Systems Efficiency Analysis
		07.0201	Banking and Related Financial Programs, General
		07.0202	Credit Collection Clerk
		07.0203	Insurance Clerk
		07.0204	Loan Clerk
		07.0206	Transit Clerk
		07.0299	Banking and Related Financial Programs, Other
		07.9999	Business and Office, Other

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Handbook VI Vocational Programs		New Classification	
16.0000	Technical Education	10.	Communication Technologies
		15.	Engineering and Engineering-Related Technologies
		41.	Science Technologies
16.0100	Engineering-related Technology	15.	Engineering and Engineering-Related Technologies
16.0101	Aeronautical Technology	15.0801	Aeronautical Technology
16.0102	Agricultural Technology	15.0802	Agricultural Equipment Technology
16.0103	Architectural Technology (Building Construction)	15.0101	Architectural Design and Construction Technology
		15.0102	Architectural Interior Design Technology
		15.0199	Architectural Technologies, Other
16.0104	Automotive Technology	15.0803	Automotive Technology
16.0105	Chemical Technology	15.0601	Chemical Manufacturing Technology
16.0106	Civil Technology	15.0201	Civil Technology
		15.0202	Drafting and Design Technology
		15.0203	Surveying and Mapping Technology
		15.0204	Urban Planning Technology
		15.0299	Civil Technologies, Other
16.0107	Electrical Technology	15.0302	Electrical Technology
16.0108	Electronic Technology	15.0303	Electronic Technology
16.0109	Electromechanical Technology	15.0401	Biomedical Equipment Technology
		15.0402	Computer Servicing Technology
		15.0403	Electromechanical Technology
		15.0499	Electromechanical Instrumentation and Maintenance Technologies, Other
16.0110	Environmental-control Technology	15.0501	Air Conditioning, Heating, and Refrigeration Technology
		15.0502	Air Pollution Control Technology
		15.0503	Energy Conservation and Use Technology
		15.0504	Sanitation Technology
		15.0505	Solar Heating and Cooling Technology
		15.0506	Water and Wastewater Technology
		15.0599	Environmental-Control Technologies, Other
16.0111	Industrial Technology	15.0603	Industrial Technology
		15.0604	Manufacturing Technology
		15.0605	Marine Products Technology
		15.0606	Optical Technology
		15.0607	Plastic Technology
		15.0608	Safety Technology
		15.0609	Textile Technology
		15.0610	Welding Technology
		15.0699	Industrial Production Technologies, Other
16.0112	Instrumentation Technology	15.0404	Instrumentation Technology
16.0113	Mechanical Technology	15.0805	Mechanical Design Technology
16.0114	Metallurgical Technology	41.0303	Metallurgical Technology
16.0115	Nuclear Technology	41.0201	Nuclear Materials Handling Technology
		41.0202	Nuclear Power Plant Operation Technology
		41.0203	Nuclear Power Plant Radiation Control Technology
		41.0204	Radiologic (Physical) Technology
		41.0299	Nuclear Technologies, Other
16.0116	Petroleum Technology	15.0903	Petroleum Technology
16.0117	Scientific Data Processing	11.0301	Data Processing
16.0199	Other Engineering-related Technology	15.0301	Computer Technology
		15.0304	Laser Electro-Optic Technology
		15.0399	Electrical and Electronic Technologies, Other
		15.0701	Occupational Safety and Health Technology
		15.0702	Quality Control Technology
		15.0799	Quality Control and Safety Technologies, Other
		15.0804	Marine Propulsion Technology
		15.0901	Coal Mining Technology

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Handbook VI Vocational Programs		New Classification	
16.0199	Other Engineering-related Technology (Continued)	15.0902	Mining (Excluding Coal) Technology
		15.0999	Mining and Petroleum Technologies, Other
		15.9999	Engineering and Engineering-Related Technologies, Other
16.0200	Agricultural-related Technology	01.0201	Agricultural Mechanics, General
16.0201	Animal Science	01.0302	Animal Production
16.0202	Dairy Technology	01.0399	Agricultural Production, Other
16.0203	Food Processing Technology	02.0306	Food Technology
		15.0602	Food Processing Technology
16.0204	Plant Science	01.0304	Crop Production
16.0299	Other Agricultural-related Technology	02.9999	Agricultural Sciences, Other
16.0301	Dental Hygiene (Associate Degree)	17.0102	Dental Hygiene
16.0302	Electroencephalograph Technician	17.0204	Electroencephalograph Technology
16.0303	Medical Laboratory Assisting	17.0309	Medical Laboratory Technology
16.0304	Radiologic Technology (X-ray)	17.0209	Radiograph Medical Technology
16.0305	Nursing (Associate Degree)	18.1101	Nursing, General
16.0399	Other Health-related Technology	17.9999	Allied Health, Other
16.0401	Computer Programmer	11.0201	Computer Programming
16.0402	Systems Analyst Technology	11.0501	Systems Analysis
16.0501	Child Care Center Assistant	20.0202	Child Care Aide/Assisting
16.0502	Hospital Children's Division Assistant	20.0299	Child Care and Guidance Management and Services, Other
16.0503	Teacher's Assistant at the Preprimary Level	20.0205	Teacher Aide
16.0504	Food Service Supervisor	20.0406	Food Service
16.0505	Interior Decorator Assistant	20.0506	Home Furnishings Aide
16.0506	Home Equipment Demonstrator	20.0506	Home Furnishings Aide
16.0600	Miscellaneous Technical Education	15.9999	Engineering and Engineering-Related Technologies, Other
		22.0103	Legal Assisting
		25.0301	Library Assisting
		41.9999	Science Technologies, Other
16.0601	Commercial Pilot Training	49.0102	Airplane Piloting and Navigation
16.0602	Fire and Fire Safety Technology	43.0201	Fire Control and Safety Technology
16.0603	Forestry Technology	03.0404	Forest Products Processing Technology
16.0604	Oceanographic Technology (Physical, Biological, and Fisheries)	41.0102	Oceanographic (Biological)Technology
		41.0305	Oceanographic (Physical) Technology
		49.0303	Commercial Fishing Operation
16.0605	Police (Law Enforcement and Corrections) Science Technology	43.0105	Criminal Justice Technology
16.0699	Other Miscellaneous Technical Education	10.0101	Educational Media Technology
		10.0102	Motion Picture Technology
		10.0103	Phtographic Technology
		10.0104	Radio and Television Production and Broadcasting Technology
		10.0199	Communication Technologies, Other
		15.9999	Engineering and Engineering-Related Technologies, Other
		29.0101	Military Technologies
		29.0199	Military Technologies, Other
		41.0101	Biological Laboratory Technology
		41.0199	Biological Technologies, Other
		41.0301	Chemical Technology
		41.0302	Geological Technology
		41.0304	Meteorological Technology
		41.0399	Physical Science Technologies, Other
		41.9999	Science Technologies, Other
		49.0101	Air Transportation, General

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Handbook VI Vocational Programs		New Classification	
16.0699	Other Miscellaneous Technical Education (Continued)	49.0101	Air Transportation, General
		49.0103	Aviation Computer Technology
		49.0105	Air Traffic Control
		49.0304	Deep Water Diving and Life Support Systems
		49.0305	Marina Operations
		50.0801	Graphic Arts Technology
17.0000	Trade and Industrial Occupations	46.	Construction Trades
		47.	Mechanics and Repairers
		48.	Precision Production
		49.	Transportation and Material Moving
17.0100	Air Conditioning	47.0201	Heating, Air Conditioning, and Refrigeration Mechanics, General
17.0101	Cooling	47.0202	Cooling and Refrigeration
17.0102	Heating	47.0203	Heating and Air Conditioning
17.0103	Ventilating (Filtering and Humidification)	47.0299	Heating, Air Conditioning, and Refrigeration Mechanics, Other
17.0199	Other Air Conditioning	47.0299	Heating, Air Conditioning, and Refrigeration Mechanics, Other
17.0200	Appliance Repair	47.0106	Major Appliance Repair
		47.0108	Small Appliance Repair
17.0300	Automotive Services	47.0601	Vehicle and Mobile Equipment Mechanics and Repairers, General
17.0301	Body and Fender	47.0603	Automotive Body Repair
17.0302	Mechanics	47.0604	Automotive Mechanics
17.0303	Specialization	47.0699	Vehicle and Mobile Equipment Mechanics and Repairers, Other
17.0399	Other Automotive Services	47.0699	Vehicle and Mobile Equipment Mechanics and Repairers, Other
17.0400	Aviation Occupations	49.0101	Air Transportation, General
17.0401	Aircraft Maintenance	47.0602	Aircraft Mechanics
17.0402	Aircraft Operations	49.0102	Airplane Piloting and Navigation
17.0403	Ground Operations	49.0105	Air Traffic Control
17.0500	Blueprint Reading	48.0299	Graphic and Printing Communications, Other
17.0600	Business Machine Maintenance	47.0102	Business Machine Repair
17.0700	Commercial Art Occupations	48.0203	Commercial Art
17.0800	Commercial Fishing Occupations	49.0303	Commercial Fishing Operation
17.0801	Seamanship	49.0308	Sailors and Deckhands
17.0802	Ship and Boat Operation and Maintenance	49.0302	Barge and Boat Operation
17.0899	Other Commercial Fishery Occupations	49.0399	Water Transportation, Other
17.0900	Commercial Photography Occupations	48.0204	Commercial Photography
17.0901	Photographic Laboratory and Darkroom Occupations	48.0207	Photographic Laboratory and Darkroom
17.0999	Other Commercial Photography Occupations	48.0299	Graphic and Printing Communications, Other
17.1000	Construction and Maintenance Trades	46.9999	Construction Trades, Other
17.1001	Carpentry	46.0201	Carpentry
17.1002	Electricity	46.0302	Electrician
17.1003	Heavy Equipment (Construction)	47.0302	Heavy Equipment Maintenance and Repair
17.1004	Masonry	46.0102	Brick, Block, and Stonemasonry
17.1005	Painting and Decorating	46.0408	Painting and Decorating
17.1006	Plastering	46.0409	Plastering
17.1007	Plumbing and Pipefitting	46.0501	Plumbing, Pipefitting, and Steamfitting, General
		46.0502	Pipefitting and Steamfitting
		46.0503	Plumbing
		46.0599	Plumbing, Pipefitting, and Steamfitting, Other
17.1008	Drywall Installation	46.0404	Drywall Installation
17.1009	Glazing	46.0406	Glazing

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Handbook VI Vocational Programs		New Classification	
17.1010	Roofing	46.0410	Roofing
17.1099	Other Construction and Maintenance Trades	46.0402	Concrete Placing and Finishing
		46.0403	Construction Inspection
		46.0405	Floor Covering Installation
		46.0407	Insulation Installation
		46.0411	Terrazzo Installation
		46.0499	Miscellaneous Construction Trades, Other
		46.9999	Construction Trades, Other
17.1100	Custodial Services	46.0401	Building Maintenance
17.1200	Diesel Mechanic	47.0605	Diesel Engine Mechanics
17.1300	Drafting Occupations	48.0101	Drafting, General
		48.0102	Architectural Drafting
		48.0103	Civil/Structural Drafting
		48.0104	Electrical/Electronics Drafting
		48.0105	Mechanical Drafting
		48.0199	Drafting, Other
17.1400	Electrical Occupations	46.0301	Electrical and Power Transmission Installation, General
17.1401	Industrial Electrician	46.0302	Electrician
17.1402	Lineman	46.0303	Lineworker
17.1403	Motor Repairman	47.0107	Motor Repair
17.1499	Other Electrical Occupations	46.0399	Electrical and Power Transmission Installation, Other
17.1500	Electronics Occupations	47.0101	Electrical and Electronics Equipment Repair, General
17.1501	Communications	47.0103	Communications Electronics
17.1502	Industrial Electronics	47.0105	Industrial Electronics
17.1503	Radio/Television	47.0199	Electrical and Electronics Equipment Repair, Other
17.1599	Other Electronics Occupations	47.0199	Electrical and Electronics Equipment Repair, Other
17.1600	Fabric Maintenance Services	12.0101	Drycleaning and Laundering Services, General
17.1601	Drycleaning	12.0102	Drycleaning
17.1602	Laundering	12.0103	Laundering
17.1699	Other Fabric-maintenance Services	12.0199	Drycleaning and Laundering Services, Other
17.1700	Foremanship, Supervision, and Management Development	46.9999	Construction Trades, Other
17.1900	Graphic Arts Occupations	48.0201	Graphic and Printing Communications, General
17.1901	Composition, Makeup, and Typesetting	48.0205	Composition, Make-up, and Typesetting
17.1902	Printing Press Occupations	48.0208	Printing Press Operations
17.1903	Lithography, Photography, and Platemaking	48.0206	Lithography, Photography, and Platemaking
17.1904	Photoengraving		
17.1905	Silk Screen Making and Printing	48.0209	Silk Screen Making and Printing
17.1906	Bookbinding	48.0202	Bookbinding
17.1999	Other Graphic Arts	48.0299	Graphic and Printing Communications, Other
17.2000	Industrial Atomic Energy Occupations	41.0299	Nuclear Technologies
		47.0503	Industrial Nuclear Energy
17.2001	Installation, Operation, and Maintenance of Reactors	41.0202	Nuclear Power Plant Operation Technology
		47.0503	Industrial Nuclear Energy
17.2002	Radiography	41.0204	Radiologic (Physical) Technology
17.2003	Industrial Uses of Radioisotopes	47.0503	Industrial Nuclear Energy
17.2099	Other Industrial Atomic Energy Occupations	41.0299	Nuclear Technologies, Other
17.2100	Instrument Maintenance and Repair Occupations	15.0499	Electromechanical Instrumentation and Maintenance Technologies, Other
		47.0408	Watch Repair
17.2101	Instruments (other than watches and clocks)	15.0499	Electromechanical Instrumentation and Maintenance Technologies, Other
17.2102	Watchmaking and Repair	47.0408	Watch Repair
17.2200	Maritime Occupations	49.0301	Water Transportation, General
		49.0306	Marine Maintenance
		49.0307	Merchant Marine Officers
17.2300	Metalworking Occupations	48.0501	Precision Metal Work, General
17.2301	Foundry	48.0502	Foundry Work

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Handbook VI Vocational Programs		New Classification	
17.2302	Machine Shop	48.0503	Machine Tool Operation/Machine Shop
17.2303	Machine Tool Operation	48.0503	Machine Tool Operation/Machine Shop
17.2304	Metal Trades (combined)	48.0599	Precision Metal Work, Other
17.2305	Sheet Metal	48.0506	Sheet Metal
17.2306	Welding and Cutting	48.0508	Welding, Brazing, and Soldering
17.2307	Tool and Die Making	48.0507	Tool and Die Making
17.2308	Die Sinking	48.0599	Precision Metal Work, Other
17.2309	Metal Patternmaking	48.0505	Metal Patternmaking
17.2399	Other Metalworking Occupations	48.0504	Metal Fabrication
		48.0599	Precision Metal Work, Other
17.2400	Metallurgy Occupations	48.0599	Precision Metal Work, Other
17.2600	Personal Services	12.0401	Personal Services, General
17.2601	Barbering	12.0402	Barbering
17.2602	Cosmetology	12.0403	Cosmetology
17.2699	Other Personal Services	12.0404	Electrolysis
		12.0405	Massage
		12.0499	Personal Services, Other
17.2700	Plastics Occupations	48.0604	Plastics
17.2801	Fireman Training	43.0203	Firefighting
17.2802	Law Enforcement Training	43.0107	Law Enforcement
17.2899	Other Public Service Occupations	43.9999	Protective Services, Other
17.2900	Quantity Food Occupations	20.0401	Food Production, Management and Services, General
		48.0401	Precision Food Production, General
17.2901	Baker	20.0402	Baking
17.2902	Cook/Chef	20.0403	Chef/Cook
17.2903	Meat Cutter	48.0402	Meatcutting
		48.0403	Slaughtering and Butchering
17.2904	Waiter/Waitress	08.0905	Waiter/Waitress and Related Services
17.2999	Other Quantity Food Occupations	20.0499	Food Production, Management, and Services, Other
17.3000	Refrigeration	47.0202	Cooling and Refrigeration
17.3100	Small Engine Repair (Internal Combustion)	47.0606	Small Engine Repair
17.3200	Stationary Energy Sources Occupations	47.0501	Stationary Energy Sources, General
17.3201	Electric Power Generating Plants	47.0502	Conventional Electric Power Generation
17.3202	Pumping Plants	47.0504	Pumping Plants
17.3299	Other Stationary Energy Sources Occupations	47.0599	Stationary Energy Sources, Other
17.3300	Textile Production and Fabrication	20.0301	Clothing, Apparel, and Textiles Management, Production, and Services, General
17.3301	Dressmaking	20.0303	Commercial Garment and Apparel Construction
17.3302	Tailoring	20.0304	Custom Apparel/Garment Seamstress
		20.0305	Custom Tailoring and Alteration
17.3399	Other Textile Production and Fabrication	20.0399	Clothing, Apparel, and Textiles Management, Production, and Services, Other
17.3400	Leatherworking	47.0406	Shoe and Boot Repair
		48.0301	Leathermaking and Upholstering, General
		48.0302	Saddlemaking and Repair
		48.0399	Leatherworking and Upholstering, Other
17.3500	Upholstering	48.0303	Upholstering
17.3600	Woodworking Occupations	48.0701	Woodworking, General
17.3601	Millwork and Cabinet Making	48.0703	Millwork and Cabinet Making
17.3699	Other Woodworking Occupations	48.0702	Furniture Making
		48.0799	Woodworking, Other
17.9900	Other Trade and Industrial Occupations	46.0101	Brickmasonry, Stonemasonry, and Tile Setting, General
		46.0103	Tile Setting
		46.0199	Brickmasonry, Stonemasonry, and Tile Setting, Other
		46.9999	Construction Trades, Other
		47.0104	Computer Electronics
		47.0109	Vending and Recreational Machine Repair

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Handbook VI Vocational Programs		New Classification	
17.9900	Other Trade and Industrial Occupations (Continued)	47.0301	Industrial Equipment Maintenance and Repair, General
		47.0303	Industrial Machinery Maintenance and Repair
		47.0304	Mine Equipment Maintenance and Repair
		47.0305	Oil and Gas Drilling Equipment Operation and Maintenance
		47.0399	Industrial Equipment Maintenance and Repair, Other
		47.0401	Electromechanical, Hydraulic, and Pneumatic Instrument Repair
		47.0402	Gunsmithing
		47.0403	Locksmithing and Safe Repair
		47.0404	Musical Instrument Repair
		47.0405	Operation, Maintenance, and Repair of Audio-Visual Equipment
		47.0407	Sporting Goods Equipment Repair
		47.0499	Miscellaneous Mechanics and Repairers, Other
		47.9999	Mechanics and Repairers, Other
		48.0401	Precision Food Production, General
		48.0499	Precision Food Production, Other
		48.0601	Industrial Ceramics Manufacturing
		48.0602	Jewelry Design, Fabrication, and Repair
		48.0603	Optical Goods Work
		48.0699	Precision Work, Assorted Materials, Other
		48.9999	Precision Production, Other
		49.0106	Flight Attendants
		49.0201	Vehicle and Equipment Operation, General
		49.0202	Construction Equipment Operation
		49.0203	Material Handling
		49.0204	Mining Equipment Operation
		49.0205	Truck and Bus Driving
		49.0299	Vehicle and Equipment Operation, Other
		49.9999	Transportation and Material Moving, Other

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List of Vocational Education Programs

This appendix is to be used to assist individuals who are interested in placing the vocational programs contained in this classification in their traditional areas. This is not meant to be a separate classification, but it is a subset of the entire classification and is only included to provide additional assistance.

It should be noted that in addition to vocational programs there are vocational student organizations that serve as an integral part of the total instructional program. These organizations significantly help secondary, postsecondary, and college students develop vocational/career competencies and leadership skills. Vocational student organizations recognized by the U.S. Department of Education are:

Future Farmers of America (FFA)
National Postsecondary Agriculture Student Organization (NPASO)
Future Business Leaders of America (FBLA)
Office Education Association (OEA)
Distributive Education Clubs of America (DECA)
Health Occupation Students of America (HOSA)
Future Homemakers of America (FHA & HERO) Chapters
American Industrial Arts Student Associations (AIASA)
Vocational Industrial Clubs of America (VICA)

Agriculture/Agribusiness

(From Agribusiness and Agricultural Production, Category 01 of the Classification)

01.01 ***Agricultural Business and Management***
- *01.0101 Agricultural Business and Management, General*
- *01.0104 Farm and Ranch Management*

01.02 ***Agricultural Mechanics***
- *01.0201 Agricultural Mechanics, General*
- *01.0202 Agricultural Electrification, Power, and Controls*
- *01.0203 Agricultural Mechanics, Construction, and Maintenance Skills*
- *01.0204 Agricultural Power Machinery*
- *01.0205 Agricultural Structures, Equipment, and Facilities*
- *01.0206 Soil and Water Mechanical Practices*
- *01.0299 Agricultural Mechanics, Other*

01.03 ***Agricultural Production***
- *01.0301 Agricultural Production, General*
- *01.0302 Animal Production*
- *01.0303 Aquaculture*
- *01.0304 Crop Production*
- *01.0305 Game Farm Management*
- *01.0399 Agricultural Production, Other*

01.04 ***Agricultural Products and Processing***
- *01.0401 Agricultural Products and Processing, General*
- *01.0402 Food Products*
- *01.0403 Nonfood Products*
- *01.0499 Agricultural Products and Processing, Other*

01.05 ***Agricultural Services and Supplies***
- *01.0501 Agricultural Services and Supplies, General*
- *01.0502 Agricultural Services*
- *01.0503 Agricultural Supplies Marketing*
- *01.0504 Animal Grooming*
- *01.0505 Animal Training*
- *01.0506 Horseshoeing*
- *01.0599 Agricultural Services and Supplies, Other*

01.06 ***Horticulture***
- *01.0601 Horticulture, General*
- *01.0602 Arboriculture*
- *01.0603 Floriculture*
- *01.0604 Greenhouse Operation and Management*
- *01.0605 Landscaping*
- *01.0606 Nursery Operation and Management*
- *01.0607 Turf Management*
- *01.0699 Horticulture, Other*

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01.99 ***Agribusiness and Agricultural Production, Other***
01.9999 Agribusiness and Agricultural Production, Other

(From Renewable Natural Resources, Category 03 of the Classification)

03.01 ***Renewable Natural Resources, General***
03.0101 Renewable Natural Resources, General

03.02 ***Conservation and Regulation***
03.0201 Conservation and Regulation, General
03.0202 Conservation
03.0203 Resources Protection and Regulation
03.0299 Conservation and Regulation, Other

03.03 ***Fishing and Fisheries***
03.0301 Fishing and Fisheries, General
03.0302 Fisheries
03.0399 Fishing and Fisheries, Other

03.04 ***Forestry Production and Processing***
03.0401 Forestry Production and Processing, General
03.0402 Forest Production
03.0403 Forest Products Utilization
03.0405 Logging
03.0406 Pulp and Paper Production
03.0499 Forestry Production and Processing, Other

03.06 ***Wildlife Management***
03.0601 Wildlife Management

03.99 ***Renewable Natural Resources, Other***
03.9999 Renewable Natural Resources, Other

(From Parks and Recreation, Category 31 of the Classification)

31.02 ***Outdoor Recreation***
31.0201 Outdoor Recreation

Business and Office

(From Business and Management, Category 06 of the Classification)

06.04 ***Business Administration and Management***
06.0401 Business Administration and Management, General
06.0404 Systems Efficiency Analysis

(From Business and Office, Category 07 of the Classification)

07.01 ***Accounting, Bookkeeping, and Related Programs***
07.0101 Accounting, Bookkeeping, and Related Programs, General
07.0102 Accounting and Computing
07.0103 Bookkeeping
07.0104 Machine Billing, Bookkeeping, and Computing
07.0199 Accounting, Bookkeeping, and Related Programs, Other

07.02 ***Banking and Related Financial Programs***
07.0201 Banking and Related Financial Programs, General
07.0202 Credit Collection Clerk
07.0203 Insurance Clerk
07.0204 Loan Clerk
07.0205 Teller
07.0206 Transit Clerk
07.0299 Banking and Related Financial Programs, Other

07.03 ***Business Data Processing and Related Programs***
07.0301 Business Data Processing and Related Programs, General
07.0302 Business Computer and Console Operation
07.0303 Business Data Entry Equipment Operation
07.0304 Business Data Peripheral Equipment Operation
07.0305 Business Data Programming
07.0306 Business Systems Analysis
07.0399 Business Data Processing and Related Programs, Other

07.04 ***Office Supervision and Management***
07.0401 Office Supervision and Management

07.05 ***Personnel and Training Programs***
07.0501 Personnel and Training Programs, General
07.0502 Educational Assisting and Training
07.0503 Personnel Assisting
07.0599 Personnel and Training Programs, Other

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07.06 *Secretarial and Related Programs*
- 07.0601 Secretarial and Related Programs, General
- 07.0602 Court Reporting
- 07.0603 Executive Secretarial
- 07.0604 Legal Secretarial
- 07.0605 Medical Secretarial
- 07.0606 Secretarial
- 07.0607 Stenographic
- 07.0608 Word Processing
- 07.0699 Secretarial and Related Programs, Other

07.07 *Typing, General Office, and Related Programs*
- 07.0701 Typing, General Office, and Related Programs, General
- 07.0702 Clerk-Typist
- 07.0703 Correspondense Clerk
- 07.0704 Duplicating Machine Operation
- 07.0705 General Office Clerk
- 07.0706 Mail and Order Clerk
- 07.0707 Receptionist and Communication Systems Operation
- 07.0708 Shipping, Receiving, and Stock Clerk
- 07.0709 Traffic, Rate, and Transportation Clerk
- 07.0710 Typing
- 07.0799 Typing, General Office, and Related Programs, Other

07.99 *Business and Office, Other*
- 07.9999 Business and Office, Other

Marketing and Distribution

(From Business and Management, Category 06 of the Classification)

06.17 *Real Estate*
- 06.1701 Real Estate, General
- 06.1702 Commercial Property
- 06.1703 Property Management
- 06.1707 Residential Property
- 06.1799 Real Estate, Other

(From Marketing and Distribution, Category 08 of the Classification)

08.01 *Apparel and Accessories Marketing*
- 08.0101 Apparel and Accessories Marketing, General
- 08.0102 Fashion Merchandising
- 08.0104 Footwear Marketing
- 08.0105 Jewelry Marketing
- 08.0199 Apparel and Accessories Marketing, Other

08.02 *Business and Personal Services Marketing*
- 08.0201 Business and Personal Services Marketing, General
- 08.0202 Display
- 08.0203 Marketing of Business or Personal Services
- 08.0299 Business and Personal Services Marketing, Other

08.03 *Entrepreneurship*
- 08.0301 Entrepreneurship, General

(From Business and Management, Category 06 of the Classification)

06.18 *Small Business Management and Ownership*
- 06.1801 Small Business Management
- 06.1802 Small Business Ownership
- 06.1899 Small Business Management and Ownership, Other

08.04 *Financial Services Marketing*
- 08.0401 Financial Services Marketing, General
- 08.0402 Banking Marketing
- 08.0403 Credit Marketing
- 08.0404 Credit Union Marketing
- 08.0405 Savings and Loan Marketing
- 08.0406 Securities and Commodities Marketing
- 08.0499 Financial Services Marketing, Other

08.05 *Floristry, Farm and Garden Supplies Marketing*
- 08.0501 Floristry, Farm and Garden Supplies Marketing, General
- 08.0502 Farm and Garden Supplies Marketing
- 08.0503 Floristry
- 08.0599 Floristry, Farm and Garden Supplies Marketing, Other

08.06 *Food Marketing*
- 08.0601 Food Marketing, General
- 08.0602 Convenience Store Marketing
- 08.0603 Specialty Foods Marketing
- 08.0604 Supermarket Marketing
- 08.0605 Wholesale Food Marketing
- 08.0699 Food Marketing, Other

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08.07 ***General Marketing***

08.0701 *Auctioneering*
08.0702 *Industrial Sales*
08.0703 *International Marketing*
08.0704 *Purchasing*
08.0705 *Retailing*
08.0706 *Sales*
08.0707 *Wholesaling*
08.0799 *General Marketing, Other*

(From Business and Management, Category 06 of the Classification)

06.14 ***Marketing Management and Research***

06.1401 *Marketing Management*
06.1402 *Marketing Research*
06.1499 *Marketing Management and Research, Other*

08.08 ***Home and Office Products Marketing***

08.0801 *Home and Office Products Marketing, General*
08.0802 *Appliance Marketing*
08.0803 *Building Materials Marketing*
08.0804 *Floor Coverings, Draperies, and Upholstery Marketing*
08.0805 *Furniture Marketing*
08.0806 *Hardware Marketing*
08.0807 *Office Products and Equipment Marketing*
08.0808 *Specialty Home Furnishings Marketing*
08.0899 *Home and Office Products Marketing, Other*

08.09 ***Hospitality and Recreation Marketing***

08.0901 *Hospitality and Recreation Marketing, General*
08.0902 *Marketing of Hotel/Motel Services*
08.0903 *Marketing of Recreational Services*
08.0904 *Recreational Products Marketing*
08.0905 *Waiter/Waitress and Related Services*
08.0999 *Hospitality and Recreation Marketing, Other*

(From Business and Management Category 06 of the Classification)

06.07 ***Institutional Management***

06.0701 *Hotel/Motel Management*
06.0702 *Recreational Enterprises Management*
06.0703 *Resort Management*
06.0704 *Restaurant Management*
06.0705 *Transportation Management*
06.0799 *Institutional Management, Other*

08.10 ***Insurance Marketing***

08.1001 *Insurance Marketing, General*
08.1002 *Accident and Health Insurance Marketing*
08.1003 *Life Insurance Marketing*
08.1004 *Property and Casualty Insurance Marketing*
08.1099 *Insurance Marketing, Other*

08.11 ***Transportation and Travel Marketing***

08.1101 *Transportation and Travel Marketing, General*
08.1102 *Freight Transportation Marketing*
08.1103 *Passenger Transportation Marketing*
08.1104 *Tourism*
08.1105 *Travel Services Marketing*
08.1106 *Warehouse Services Marketing*
08.1199 *Transportation and Travel Marketing, Other*

08.12 ***Vehicles and Petroleum Marketing***

08.1201 *Vehicles and Petroleum Marketing, General*
08.1202 *Agricultural Implements and Machinery Marketing*
08.1203 *Automotive Vehicles and Accessories Marketing*
08.1204 *Petroleum Wholesaling*
08.1205 *Recreational Vehicles and Accessories Marketing*
08.1206 *Service Station Retailing*
08.1207 *Vehicle Rental and Leasing*
08.1299 *Vehicles and Petroleum Marketing, Other*

08.99 ***Marketing and Distribution, Other***

08.9999 *Marketing and Distribution, Other*

(From Communications, Category 09 of the Classification)

09.02 ***Advertising***

09.0201 *Advertising*

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Health Occupations

(From Allied Health, Category 17 of the Classification)

17.01 ***Dental Services***
- *17.0101* Dental Assisting
- *17.0102* Dental Hygiene
- *17.0103* Dental Laboratory Technology
- *17.0199* Dental Services, Other

17.02 ***Diagnostic and Treatment Services***
- *17.0201* Cardiopulmonary Technology
- *17.0202* Dialysis Technology
- *17.0203* Electrocardiograph Technology
- *17.0204* Electroencephalograph Technology
- *17.0205* Emergency Medical Technology-Ambulance
- *17.0206* Emergency Medical Technology-Paramedic
- *17.0207* Medical Radiation Dosimetry
- *17.0208* Nuclear Medical Technology
- *17.0209* Radiograph Medical Technology
- *17.0210* Respiratory Therapy Technology
- *17.0211* Surgical Technology
- *17.0212* Ultrasound Technology
- *17.0299* Diagnostic and Treatment Services, Other

17.03 ***Medical Laboratory Technologies***
- *17.0301* Blood Bank Technology
- *17.0302* Chemistry Technology
- *17.0303* Clinical Animal Technology
- *17.0304* Clinical Laboratory Aide
- *17.0305* Clinical Laboratory Assisting
- *17.0306* Cytotechnology
- *17.0307* Hematology Technology
- *17.0308* Histologic Technology
- *17.0309* Medical Laboratory Technology
- *17.0310* Medical Technology
- *17.0311* Microbiology Technology
- *17.0399* Medical Laboratory Technologies, Other

17.04 ***Mental Health/Human Services***
- *17.0401* Alcohol/Drug Abuse Specialty
- *17.0402* Community Health Work
- *17.0403* Genetic Counseling
- *17.0404* Home Health Aide
- *17.0405* Mental Health/Human Services Assisting
- *17.0406* Mental Health/Human Services Technology
- *17.0407* Rehabilitation Counseling
- *17.0408* Therapeutic Child Care Work
- *17.0499* Mental Health/Human Services, Other

17.05 ***Miscellaneous Allied Health Services***
- *17.0501* Animal Technology
- *17.0502* Central Supply Technology
- *17.0503* Medical Assisting
- *17.0504* Medical Illustrating
- *17.0505* Medical Office Management
- *17.0506* Medical Records Technology
- *17.0507* Pharmacy Assisting
- *17.0508* Physician Assisting-Primary Care
- *17.0509* Physician Assisting-Specialty
- *17.0510* Podiatric Assisting
- *17.0511* Veterinarian Aide
- *17.0512* Veterinarian Assisting
- *17.0513* Ward Clerk
- *17.0599* Miscellaneous Allied Health Services, Other

17.06 ***Nursing-Related Services***
- *17.0601* Geriatric Aide
- *17.0602* Nursing Assisting
- *17.0603* Obstetrical Technology
- *17.0604* Pediatric Aide
- *17.0605* Practical Nursing
- *17.0606* Ward Service Management
- *17.0699* Nursing-Related Services, Other

17.07 ***Opbthalmic Services***
- *17.0701* Ophthalmic Dispensing
- *17.0702* Ophthalmic Laboratory Technology
- *17.0703* Ophthalmic Medical Assisting
- *17.0704* Optometric Assisting
- *17.0705* Optometric Technology
- *17.0706* Orthoptics
- *17.0799* Ophthalmic Services, Other

17.08 ***Rehabilitation Services***
- *17.0801* Art Therapy
- *17.0802* Corrective Therapy
- *17.0803* Dance Therapy
- *17.0804* Exercise Physiology
- *17.0805* Manual Arts Therapy
- *17.0806* Music Therapy
- *17.0807* Occupational Therapy
- *17.0808* Occupational Therapy Assisting
- *17.0809* Occupational Therapy Aide
- *17.0810* Orthotic/Prosthetic Assisting
- *17.0811* Orthotics/Prosthetics
- *17.0812* Orthopedic Assisting
- *17.0813* Physical Therapy
- *17.0814* Physical Therapy Aide
- *17.0815* Physical Therapy Assisting
- *17.0816* Recreational Therapy
- *17.0817* Recreational Therapy Technology
- *17.0818* Respiratory Therapy
- *17.0819* Respiratory Therapy Assisting
- *17.0820* Speech/Hearing Therapy Aide
- *17.0821* Speech-Language Pathology/Audiology
- *17.0899* Rehabilitation Services, Other

17.99 ***Allied Health, Other***
- *17.9999* Allied Health, Other

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(From Health Sciences, Category 18 of the Classification)

18.11 ***Nursing***
18.1101 *Nursing, General*

Home Economics

(From Architecture and Environmental Design, Category 04 of the Classification)

04.05 ***Interior Design***
04.0501 *Interior Design*

(From Vocational Home Economics, Category 20 of the Classification)

20.01 ***Consumer and Homemaking Home Economics***
20.0101 *Comprehensive Consumer and Homemaking Home Economics*
20.0102 *Child Development, Care, and Guidance*
20.0103 *Clothing and Textiles*
20.0104 *Consumer Education*
20.0105 *Exploratory Homemaking*
20.0106 *Family/Individual Health*
20.0107 *Family Living and Parenthood*
20.0108 *Food and Nutrition*
20.0109 *Home Management*
20.0110 *Housing, Home Furnishing and Equipment*
20.0199 *Consumer and Homemaking Home Economics, Other*

20.02 ***Child Care and Guidance Management and Services***
20.0201 *Child Care and Guidance Management and Services, General*
20.0202 *Child Care Aide/Assisting*
20.0203 *Child Care Management*
20.0204 *Foster Care/Family Care*
20.0205 *Teacher Aide*
20.0299 *Child Care and Guidance Management and Services, Other*

20.03 ***Clothing, Apparel, and Textiles Management, Production, and Services***
20.0301 *Clothing, Apparel, and Textiles Management, Production, and Services, General*
20.0302 *Clothing Maintenance Aide*
20.0303 *Commercial Garment and Apparel Construction*
20.0304 *Custom Apparel/Garment Seamstress*
20.0305 *Custom Tailoring and Alteration*
20.0306 *Fashion/Fabric Coordination*
20.0307 *Textiles Testing*
20.0308 *Wedding/Specialty Consulting*
20.0399 *Clothing, Apparel, and Textiles Management, Production, and Services, Other*

20.04 ***Food Production, Management, and Services***
20.0401 *Food Production, Management, and Services, General*
20.0402 *Baking*
20.0403 *Chef/Cook*
20.0404 *Dietetic Aide/Assisting*
20.0405 *Food Catering*
20.0406 *Food Service*
20.0407 *Food Testing*
20.0408 *School Food Service*
20.0499 *Food Production, Management, and Services, Other*

20.05 ***Home Furnishings and Equipment Management, Production, and Services***
20.0501 *Home Furnishings and Equipment Management, Production, and Services, General*
20.0502 *Custom Drapery and Window Treatment Design/Making*
20.0503 *Custom Slipcovering and Upholstering*
20.0504 *Floral Design*
20.0505 *Home Decorating*
20.0506 *Home Furnishings Aide*
20.0507 *Home-Service Assisting*
20.0599 *Home Furnishings and Equipment Management, Production, and Services, Other*

20.06 ***Institutional, Home Management, and Supporting Services***
20.0601 *Institutional, Home Management, and Supporting Services, General*
20.0602 *Companion to the Aged*
20.0603 *Consumer Aide/Assisting*
20.0604 *Custodial Services*
20.0605 *Executive Housekeeping*
20.0606 *Homemaker's Aide*
20.0607 *Therapeutic Recreation Aide*
20.0699 *Institutional, Home Management, and Supporting Services, Other*

20.99 ***Vocational Home Economics, Other***
20.9999 *Vocational Home Economics, Other*

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Industrial Arts

(From Industrial Arts, Category 21 of the Classification)

21.01 ***Industrial Arts***
- *21.0101 Industrial Arts, General*
- *21.0102 Construction*
- *21.0103 Drafting and Design*
- *21.0104 Electricity/Electronics*
- *21.0105 Energy, Power, and Transportation*
- *21.0106 Graphic Arts*
- *21.0107 Manufacturing/Materials Processing*
- *21.0199 Industrial Arts, Other*

Technical Education

(From Agricultural Sciences, Category 02 of the Classification)

02.03 ***Food Sciences***
- *02.0306 Food Technology*

(From Renewable Natural Resources, Category 03 of the Classification)

03.04 ***Forestry Production and Processing***
- *03.0404 Forest Products Processing Technology*

(From Consumer, Personal, and Miscellaneous Services, Category 12 of the Classification)

12.03 ***Funeral Services***
- *12.0301 Funeral Services*

(From Communication Technologies, Category 10 of the Classification)

10.01 ***Communication Technologies***
- *10.0101 Educational Media Technology*
- *10.0102 Motion Picture Technology*
- *10.0103 Photographic Technology*
- *10.0104 Radio and Television Production and Broadcasting Technology*
- *10.0199 Communication Technologies, Other*

(From Computer and Information Sciences, Category 11 of the Classification)

11.02 ***Computer Programming***
- *11.0201 Computer Programming*

11.03 ***Data Processing***
- *11.0301 Data Processing*

11.04 ***Systems Analysis***
- *11.0401 Systems Analysis*

(From Engineering and Engineering-Related Technologies, Category 15 of the Classification)

15.01 ***Architectural Technologies***
- *15.0101 Architectural Design and Construction Technology*
- *15.0102 Architectural Interior Design Technology*
- *15.0199 Architectural Technologies, Other*

15.02 ***Civil Technologies***
- *15.0201 Civil Technology*
- *15.0202 Drafting and Design Technology*
- *15.0203 Surveying and Mapping Technology*
- *15.0204 Urban Planning Technology*
- *15.0299 Civil Technologies, Other*

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15.03 *Electrical and Electronic Technologies*
- 15.0301 Computer Technology
- 15.0302 Electrical Technology
- 15.0303 Electronic Technology
- 15.0304 Laser Electro-Optic Technology
- 15.0399 Electrical and Electronic Technologies, Other

15.04 *Electromechanical Instrumentation and Maintenance Technologies*
- 15.0401 Biomedical Equipment Technology
- 15.0402 Computer Servicing Technology
- 15.0403 Electromechanical Technology
- 15.0404 Instrumentation Technology
- 15.0499 Electromechanical Instrumentation and Maintenance Technologies, Other

15.05 *Environmental Control Technologies*
- 15.0501 Air Conditioning, Heating, and Refrigeration Technology
- 15.0502 Air Pollution Control Technology
- 15.0503 Energy Conservation and Use Technology
- 15.0504 Sanitation Technology
- 15.0505 Solar Heating and Cooling Technology
- 15.0506 Water and Wastewater Technology
- 15.0599 Environmental Control Technologies, Other

15.06 *Industrial Production Technologies*
- 15.0601 Chemical Manufacturing Technology
- 15.0602 Food Processing Technology
- 15.0603 Industrial Technology
- 15.0604 Manufacturing Technology
- 15.0605 Marine Products Technology
- 15.0606 Optical Technology
- 15.0607 Plastic Technology
- 15.0608 Safety Technology
- 15.0609 Textile Technology
- 15.0610 Welding Technology
- 15.0699 Industrial Production Technologies, Other

15.07 *Quality Control and Safety Technologies*
- 15.0701 Occupational Safety and Health Technology
- 15.0702 Quality Control Technology
- 15.0799 Quality Control and Safety Technologies, Other

15.08 *Mechanical and Related Technologies*
- 15.0801 Aeronautical Technology
- 15.0802 Agricultural Equipment Technology
- 15.0803 Automotive Technology
- 15.0804 Marine Propulsion Technology
- 15.0805 Mechanical Design Technology
- 15.0899 Mechanical and Related Technologies, Other

15.09 *Mining and Petroleum Technologies*
- 15.0901 Coal Mining Technology
- 15.0902 Mining (Excluding Coal) Technology
- 15.0903 Petroleum Technology
- 15.0999 Mining and Petroleum Technologies, Other

15.99 *Engineering and Engineering-Related Technologies, Other*
- 15.9999 Engineering and Engineering-Related Technologies, Other

(From Law, Category 22 of the Classification)

22.01 *Law*
- 22.0103 Legal Assisting

(From Library and Archival Sciences, Category 25 of the Classification)

25.03 *Library Assisting*
- 25.0301 Library Assisting

(From Military Technologies, Category 29 of the Classification)

29.01 *Military Technologies*
- 29.0101 Military Technologies
- 29.0199 Military Technologies, Other

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(From Science Technologies, Category 41 of the Classification)

41.01	***Biological Technologies***	
	41.0101	*Biological Laboratory Technology*
	41.0102	*Oceanographic (Biological) Technology*
	41.0199	*Biological Technologies, Other*
41.02	***Nuclear Technologies***	
	41.0201	*Nuclear Materials Handling Technology*
	41.0202	*Nuclear Power Plant Operation Technology*
	41.0203	*Nuclear Power Plant Radiation Control Technology*
	41.0204	*Radiologic (Physical) Technology*
	41.0299	*Nuclear Technologies, Other*
41.03	***Physical Science Technologies***	
	41.0301	*Chemical Technology*
	41.0302	*Geological Technology*
	41.0303	*Metallurgical Technology*
	41.0304	*Meteorological Technology*
	41.0305	*Oceanographic (Physical) Technology*
	41.0399	*Phsyical Science Technologies, Other*
41.99	***Science Technologies, Other***	
	41.9999	*Science Technologies, Other*

(From Protective Services, Category 43 of the Classification)

43.01	***Criminal Justice***	
	43.0105	*Criminal Justice Technology*
43.02	***Fire Protection***	
	43.0201	*Fire Control and Safety Technology*

(From Transportation and Material Moving, Category 49 of the Classification)

49.01	***Air Transportation***	
	49.0101	*Air Transportation, General*
	49.0102	*Airplane Piloting and Navigation*
	49.0103	*Aviation Computer Technology*
	49.0105	*Air Traffic Control*
49.03	***Water Transportation***	
	49.0303	*Commercial Fishing Operation*
	49.0304	*Deep Water Diving and Life Support Systems*
	49.0305	*Marina Operations*

(From Visual and Performing Arts, Category 50 of the Classification)

50.08	***Graphic Arts Technology***	
	50.0801	*Graphic Arts Technology*

Trade and Industrial

(From Consumer, Personal, and Miscellaneous Services, Category 12 of the Classification)

12.01	***Drycleaning and Laundering Services***	
	12.0101	*Drycleaning and Laundering Services, General*
	12.0102	*Drycleaning*
	12.0103	*Laundering*
	12.0199	*Drycleaning and Laundering Services, Other*
12.04	***Personal Services***	
	12.0401	*Personal Services, General*
	12.0402	*Barbering*
	12.0403	*Cosmetology*
	12.0404	*Electrolysis*
	12.0405	*Massage*
	12.0499	*Personal Services, Other*

(From Protective Services, Category 43 of the Classification)

43.01	***Criminal Justice***	
	43.0107	*Law Enforcement*
	43.0109	*Security Services*
43.02	***Fire Protection***	
	43.0203	*Firefighting*

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(From Construction Trades, Category 46 of the Classification)

46.01 ***Brickmasonry, Stonemasonry, and Tile Setting***
- *46.0101 Brickmasonry, Stonemasonry, and Tile Setting, General*
- *46.0102 Brick, Block, and Stonemasonry*
- *46.0103 Tile Setting*
- *46.0199 Brickmasonry, Stonemasonry, and Tile Setting, Other*

46.02 ***Carpentry***
- *46.0201 Carpentry*

46.03 ***Electrical and Power Transmission Installation***
- *46.0301 Electrical and Power Transmission Installation, General*
- *46.0302 Electrician*
- *46.0303 Lineworker*
- *46.0399 Electrical and Power Transmission Installation, Other*

46.04 ***Miscellaneous Construction Trades***
- *46.0401 Building Maintenance*
- *46.0402 Concrete Placing and Finishing*
- *46.0403 Contruction Inspection*
- *46.0404 Drywall Installation*
- *46.0405 Floor Covering Installation*
- *46.0406 Glazing*
- *46.0407 Insulation Installation*
- *46.0408 Painting and Decorating*
- *46.0409 Plastering*
- *46.0410 Roofing*
- *46.0411 Terrazzo Installation*
- *46.0499 Miscellaneous Construction Trades, Other*

46.05 ***Plumbing, Pipefitting, and Steamfitting***
- *46.0501 Plumbing, Pipefitting, and Steamfitting, General*
- *46.0502 Pipefitting and Steamfitting*
- *46.0503 Plumbing*
- *46.0599 Plumbing, Pipefitting, and Steamfitting, Other*

46.99 ***Construction Trades, Other***
- *46.9999 Construction Trades, Other*

(From Mechanics and Repairers, Category 47 of the Classification)

47.01 ***Electrical and Electronics Equipment Repair***
- *47.0101 Electrical and Electronics Equipment Repair, General*
- *47.0102 Business Machine Repair*
- *47.0103 Communications Electronics*
- *47.0104 Computer Electronics*
- *47.0105 Industrial Electronics*
- *47.0106 Major Applicance Repair*
- *47.0107 Motor Repair*
- *47.0108 Small Appliance Repair*
- *47.0109 Vending and Recreational Machine Repair*
- *47.0199 Electrical and Electronics Equipment Repair, Other*

47.02 ***Heating, Air Conditioning, and Refrigeration Mechanics***
- *47.0201 Heating, Air Conditioning, and Refrigeration Mechanics, General*
- *47.0202 Cooling and Refrigeration*
- *47.0203 Heating and Air Conditioning*
- *47.0299 Heating, Air Conditioning, and Refrigeration Mechanics, Other*

47.03 ***Industrial Equipment Maintenance and Repair***
- *47.0301 Industrial Equipment Maintenance and Repair, General*
- *47.0302 Heavy Equipment Maintenance and Repair*
- *47.0303 Industrial Machinery Maintenance and Repair*
- *47.0304 Mine Equipment Maintenance and Repair*
- *47.0305 Oil and Gas Drilling Equipment Operation and Maintenance*
- *47.0399 Industrial Equipment Maintenance and Repair, Other*

47.04 ***Miscellaneous Mechanics and Repairers***
- *47.0401 Electromechanical, Hydraulic, and Pneumatic Instrument Repair*
- *47.0402 Gunsmithing*
- *47.0403 Locksmithing and Safe Repair*
- *47.0404 Musical Instrument Repair*
- *47.0405 Operation, Maintenance, and Repair of Audio-Visual Equipment*
- *47.0406 Shoe and Boot Repair*
- *47.0407 Sporting Goods Equipment Repair*
- *47.0408 Watch Repair*
- *47.0499 Miscellaneous Mechanics and Repairers, Other*

47.05 ***Stationary Energy Sources***
- *47.0501 Stationary Energy Sources, General*
- *47.0502 Conventional Electric Power Generation*
- *47.0503 Industrial Nuclear Energy*
- *47.0504 Pumping Plants*
- *47.0599 Stationary Energy Sources, Other*

47.06 ***Vehicle and Mobile Equipment Mechanics and Repairers***
- *47.0601 Vehicle and Mobile Equipment Mechanics and Repairers, General*
- *47.0602 Aircraft Mechanics*
- *47.0603 Automotive Body Repair*
- *47.0604 Automotive Mechanics*
- *47.0605 Diesel Engine Mechanics*
- *47.0606 Small Engine Repair*
- *47.0699 Vehicle and Mobile Equipment Mechanics and Repairers, Other*

47.99 ***Mechanics and Repairers, Other***
- *47.9999 Mechanics and Repairers, Other*

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(From Precision Production, Category 48 of the Classification)

48.01 ***Drafting***
- *48.0101 Drafting, General*
- *48.0102 Architectural Drafting*
- *48.0103 Civil/Structural Drafting*
- *48.0104 Electrical/Electronics Drafting*
- *48.0105 Mechanical Drafting*
- *48.0199 Drafting, Other*

48.02 ***Graphic and Printing Communications***
- *48.0201 Graphic and Printing Communications, General*
- *48.0202 Bookbinding*
- *48.0203 Commercial Art*
- *48.0204 Commercial Photography*
- *48.0205 Composition, Make-up, and Typesetting*
- *48.0206 Lithography, Photography, and Plate-making*
- *48.0207 Photographic Laboratory and Darkroom*
- *48.0208 Printing Press Operations*
- *48.0209 Silk Screen Making and Printing*
- *48.0299 Graphic and Printing Communications, Other*

48.03 ***Leatherworking and Upholstering***
- *48.0301 Leatherworking and Upholstering, General*
- *48.0302 Saddlemaking and Repair*
- *48.0303 Upholstering*
- *48.0399 Leatherworking and Upholstering, Other*

48.04 ***Precision Food Production***
- *48.0401 Precision Food Production, General*
- *48.0402 Meatcutting*
- *48.0403 Slaughtering and Butchering*
- *48.0499 Precision Food Production, Other*

48.05 ***Precision Metal Work***
- *48.0501 Precision Metal Work, General*
- *48.0502 Foundry Work*
- *48.0503 Machine Tool Operation/Machine Shop*
- *48.0504 Metal Fabrication*
- *48.0505 Metal Patternmaking*
- *48.0506 Sheet Metal*
- *48.0507 Tool and Die Making*
- *48.0508 Welding, Brazing, and Soldering*
- *48.0599 Precision Metal Work, Other*

48.06 ***Precision Work, Assorted Materials***
- *48.0601 Industrial Ceramics Manufacturing*
- *48.0602 Jewlry Design, Fabrication, and Repair*
- *48.0603 Optical Goods Work*
- *48.0604 Plastics*
- *48.0699 Precision Work, Assorted Materials, Other*

48.07 ***Woodworking***
- *48.0701 Woodworking, General*
- *48,0702 Furniture Making*
- *48.0703 Millwork and Cabinet Making*
- *48.0799 Woodworking, Other*

48.99 ***Precision Production, Other***
- *48.9999 Precision Production, Other*

(From Transportation and Material Moving, Category 49 of the Classification)

49.01 ***Air Transportation***
- *49.0106 Flight Attendants*

49.02 ***Vehicle and Equipment Operation***
- *49.0201 Vehicle and Equipment Operation, General*
- *49.0202 Construction Equipment Operation*
- *49.0203 Material Handling*
- *49.0204 Mining Equipment Operation*
- *49.0205 Truck and Bus Driving*
- *49.0299 Vehicle and Equipment Operation, Other*

49.03 ***Water Transportation***
- *49.0301 Water Transportation, General*
- *49.0302 Barge and Boat Operation*
- *49.0306 Marine Maintenance*
- *49.0307 Merchant Marine Officers*
- *49.0308 Sailors and Deckhands*
- *49.0399 Water Transportation, Other*

49.99 ***Transportation and Material Moving, Other***
- *49.9999 Transportation and Material Moving, Other*

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Contributors to the Development of the Classification

National Planning Committee

The primary review group for the project was a Task Force, the National Planning Committee, comprised of individuals particularly knowledgeable about: (a) data needs of both State and Federal agencies regarding instructional programs in higher, vocational/technical, secondary, and adult/continuing education and (b) organization and administration at each level. This committee ensured that the viewpoints of a wide range of people in the education community to be served by the new instructional program classification were incorporated. Members of the National Planning Committee were:

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A selected group of professional organizations reviewed their appropriate field/specialty category of the instructional program classification. Their responses provided additional input to the field review version. These organizations were:

American Academy of Environmental Engineers
American Association of Chemical Engineers
American Association of Physics Teachers, Committee on Physics in Higher Education
American Chemical Society, Committee on Chemical Education
American Council on Education for Journalism
American Historical Association
American Library Association
American Political Science Association
American Psychological Association
American Society of Journalism School Administrators
American Sociological Association
Association for Computing Machinery, Curriculum Committee on Computer Science
Association of American Law Schools
Association of Collegiate Schools of Architecture
Association of Theological Schools
Council on Social Work Education
Engineers' Council for Professional Development
Geological Society of America
Mathematical Association of America
Modern Language Association of America
National Architectural Accrediting Board
National Art Education Association – Teachers
National Association of Colleges and Teachers of Agriculture
National Association of Schools of Music
National Council for Accreditation of Teacher Education
Organization of American Historians
Society for the Advancement of Scandinavian Study
Society for Photographic Education
Society of American Foresters
Social Science Research Council

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Glossary

Terms included in the glossary are meant to provide the user with definitions not appearing elsewhere in *A Classification of Instructional Programs.*

Adult Basic Education (A.B.E.) — Education for adults whose inability to speak, read, or write the English language constitutes a substantial impairment of their ability to get or retain employment commensurate with their real ability, which is designed to help eliminate such inability and raise the level of education of such individuals with a view to making them less likely to become dependent on others, to improving their ability to benefit from occupational training and otherwise increasing their opportunities for more productive and profitable employment, and to making them better able to meet their adult responsibilities.

Adult Education — Instruction designed to meet the unique needs of persons — beyond the age of compulsory school attendance — who have either completed or interrupted their formal education and whose primary occupation is other than full-time students. This may be provided by a school system, college, or other agency or institution (including a technical institute or area vocational school) through activities and media such as formal classes, correspondence study, radio, television, lectures, concerts, demonstrations, and counseling.

Apprentice — A worker who is learning a recognized occupation in accordance with a written apprentice-training contract between him and his employer or employers which provides for a given period of planned work experience through employment on the job, supplemented by appropriate related instruction, and with other specified provisions of the arrangement.

Award — Formal recognition, such as a certificate, diploma, or degree conferred upon a person by an educational institution upon successful completion of an instructional program.

Certificate — A document certifying the satisfactory completion of a program of studies, course, class, or cocurricular activity, or for graduation from a school, e.g., a diploma or other certificate, promotion to the next school, and awarding of units of value.

Continuing Education — The philosophy and the process under which an institution, organization, agency, or individual provides organized learning activities for the professional or personal development of adults whose primary role is something other than a student.

Course — An organization of subject matter and related learning experiences provided for the instruction of students on a regular or systematic basis, usually for a predetermined period of time as in a semester, a quarter, or a regular school term.

Credit — The unit of value, awarded for the successful completion of certain courses, intended to indicate the quantity of course instruction in relation to the total requirements for a diploma, certificate, or degree. Credits usually are expressed in terms such as "Carnegie units," "credits," "semester credit hours," and "quarter credit hours."

Degree — An award conferred by a college, university or other postsecondary education institution as official recognition for the successful completion of a program of studies or in some instances as recognition for outstanding achievement or merit.

Diploma — A formal document certifying the successful completion of a prescribed program of studies.

Discipline — A broad, logically organized body of subject matter which is distinguished by its scholarly prestige.

Extension Education — Education offered outside its normal physical confines or formal framework by an educational institution. This may include such activities as short courses, conferences, institutes, independent study, and credit or noncredit courses offered in off-campus settings via television, correspondence, instruction or other media.

General Educational Development (GED) Program — Academic instruction to prepare persons to take the high school equivalency examination.

Higher Education — Education above the level of the secondary school, which is provided by colleges, universities, graduate schools, professional schools, and other degree-granting institutions.

Level of Instruction — An indication of the general nature and difficulty of instruction, usually identified by the designation of a grade or year in an organized educational system.

Noncredit Course — A course for which students do not receive credit applicable towards graduation or completion of a program of studies.

Occupational Field — A group of recognized occupations having many similarities, including the following characteristics in common; the type of work performed; the basic aptitudes, and the acquired knowledge and training required; the tools, machines, instruments, and other equipment used; and the basic materials used.

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On-the-job-training — A program of instruction provided to an employed worker by the employer during the normal working hours of the occupation.

Postsecondary Instructional Level — A general level of instruction provided for students in college programs, or any instruction of a comparable nature and difficulty provided for adults and youth beyond the age of compulsory school attendance.

Prerequisite — A course (completed successfully) or other requirement which is necessary as a preliminary to participation in a given activity or succeeding course.

School District — An administrative unit at the local level which exists primarily to operate public schools or to contract for public school services. Normally, taxes can be levied by such units for school purposes. These units may or may not be coterminous with county, city or town boundaries. This term is used synonymously with the term "local basic administrative unit."

Skills — Abilities acquired by observation, study, and experience in mental, physical and interpersonal performance basic to the mastery of school work and other activities.

Subject — An organized body of knowledge which may be more comprehensive than a course but is less comprehensive than a subject-matter area. For example, the subject of American history may be one course or it may be comprised of two courses, such as (a) American history up to the Civil War, and (b) American history from the Civil War to the present.

Subject-Matter Areas — The most aggregate entries of subject matter which form the basic structure of an array of mutually restrictive categories of knowledge.

Subject-Matter Descriptor — The word or words that are used to identify individual subject-matter elements at any level within a hierarchical array of knowledge.

Subject-Matter Element — A single, discrete unit of subject matter representing a designated component of the substance of knowledge.

Technology — The study of the practical applications of knowledge which emanate from the theoretical constructs of subject matter.

Work-Study Program — A school program designed to provide employment for students who could not continue in school without the financial support provided through a job. The work may or may not be curriculum related.

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Forestry and Related Sciences, Other (03.0599)
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Insurance Clerk (07.0203)

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Plumbing, Pipefitting, and Steamfitting (46.05)
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Q

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